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Editor's Foreword

This issue's Guest Editorial, "Science, Spirit, and Soul," by Arthur Young, was written in part as a response to the dialogue in our winter issue over Janusz Slawinski's controversial considerations of electromagnetic radiation and survival of bodily death. Young proposes a quite different approach to conceptualizing the central role of light in the creation and evolution of life, and a quite different, and equally provocative, concept of the role of science in the exploration of consciousness.

We also include in this issue two empirical studies. Nursing professor Nina Thornburg's article describes the development of a questionnaire to quantify nurses' knowledge of near-death phenomena, their attitudes toward such events, and their attitudes toward the care of near-death experiencers. Lorraine Davis's article compares the attitude changes that follow near-death experiences with changes that follow experiences with UFOs.

We also include in this issue a review of Carol Zaleski's book, Otherworld Journeys, which places contemporary near-death experiences and their medieval counterparts in a meaningful social context.

Bruce Greyson, M.D.
Editor
Guest Editorial
Science, Spirit, and the Soul

Arthur M. Young, D.Sc.(Hon.), Ph.D.(Hon.)
Institute for the Study of Consciousness

Intention

Current science is extremely bold when it comes to saying what happened nanoseconds after the Big Bang. It has invented some one hundred particles that haven’t been observed to explain some 32 that have been observed, most for a brief lifetime of less than a billionth of a second. But science doesn’t explain consciousness. It doesn’t explain extrasensory perception. It doesn’t explain life; and its explanation of evolution is far from satisfactory.

And if it be excused from these difficult questions on the grounds that they are not the business of science, it still can be charged not only with neglecting an important subject, but with intimidating witnesses who would like to testify.

We cannot, in this day and age, get along without science. That is because science, which started humbly to deal with aspects of nature that could be measured objectively, has contributed enormously to the understanding of the subjects it has been instrumental in developing: physics, chemistry, biology, mathematics, astronomy. In fact, it has gained a momentum, a reputation, that leads the public to expect it to do what was not in its original purview. Even scientists themselves have become so enamored of the techniques and formulations successful with inert bodies that they do not hesitate to apply those techniques to areas where they are not appropriate.

Arthur Young is the founder of the Institute for the Study of Consciousness in Berkeley, CA. Requests for reprints should be sent to Dr. Young at Robert Briggs Associates, Box 9, Mill Valley, CA 94942.
Those who wish to explore the new land—consciousness, life, etc.—may conclude that science has no place in such a quest, which would involve what Francis Bacon called primary causes. But that answer would be too simple. Currently there are difficulties at the frontier of physics that indicate that all is not well at the foundations of science itself. Problems such as the effect of the observer on what is observed, the breakdown of the principle of locality in the Einstein-Podolsky-Rosen experiment, and the virtual (unobservable) nature of the photon, all call for a better understanding of basic assumptions that might involve consciousness. Science has inadvertently stumbled into the *terra incognita* of primary causes.

These in-house problems, which threaten the rationality of science, make most scientists even more touchy and defensive when it comes to giving credence to what is regarded as witchcraft and superstition. Findings there are aplenty: extrasensory perception, distant viewing, near-death experiences, precognitive dreams, metal bending, etc. But these are cold winds to science, which responds by buttoning up its coat and refusing to stick its neck out.

Clearly, the purpose of science and of consciousness research and exploration should be one and the same, and the difficulties that they share could lead to a constructive partnership. But at this writing, there is no platform for a common debate, much less agreement as to how to carry out such a program. Any synthesis of science and consciousness research that has occurred has been done by individuals, each after their own fashion and in their own subjective terms. Such individual solutions do not furnish a language for communication or a formalism on which to build.

In the absence of such a formalism, even if we were able to reach an agreement that the many different world views that exist or have existed—polytheism, monotheism, science, witchcraft, astrology, and so on—were each valid in their own way, we would still be unable to join forces in the quest for answers to the great problem: "Why are we here and what is man?"

The momentum of the scientific endeavor leads most scientists to dismiss these as improper questions. Other scientists might answer by expression of their religious views, in which case I would have to be content. But how can they be content, since they are serving two masters? That is the dilemma of the scientist, and it is shared by most of us. We have come to rest our faith on science, and on these questions science has no answers. That, I think, is the neurosis of the West and of the modern world.

Not to press this as an accusation, but to use it as a clue, let me go a
step further, to point out that evidence for that faith in science comes just as much from the nonscientist camp. Those interested in consciousness talk about psychic "energy," "vibrations," and even consciousness or instinct as a "field." Not only is this borrowing scientific terminology for improper usage, and hence not helpful for enlisting the interest of science, but it is also misleading to nonscientists.

I have always had great respect for the precise language of science, but I do not feel science as it is generally understood is appropriate as a basis for an intelligent approach to problems such as the nature of extrasensory perception and life after death. When I first began to investigate those questions in the late 1940s, I thought that perhaps we should start all over, begin with a clean slate and reconstruct our picture of the world. It did not then occur to me that the doctrine of an exclusively objective universe was not only mistaken, but was a wrong interpretation by science of its own findings.

My first approach was to seek some unrecognized energy to explain extrasensory perception, and I attended to what theories there were in the field. Wilhelm Reich had his orgone energy; Oscar Brunler had his bioelectric field; Karl von Reichenbach his odic force. There were quite a variety of types of energy that under scrutiny were defined differently and could not be confirmed.

Then I realized that in most cases where psychic "powers" were utilized—healing, influencing plant growth, dowsing, etc.—regardless of the energy involved, the intention of the operator was a critical factor. For instance, in radionics, a system of "psychic therapy" involving instruments and dials, I found it didn't matter whether the machine was plugged in, as long as the operator thought it was. So I called this the operator factor. On the supposition that there must be something in science that anticipated this discovery, I began to look for a correlate to this "intention," this purpose.

The basic vocabulary of science is the measure formulas of physics, which reduce everything to mass, length, and time. Clearly, it would be too simple to identify intention with any of those three parameters alone. Of the six measure formulas containing all three, however, one was promising, and that was the formula for action, \( ML^2/T \). Other formulas, such as those for energy and force, are well recognized in science, but action, particularly action at a distance, while recognized, has always been one of its greatest enigmas. We can understand or at least accept as plausible the fact that when a moving body collides with a body at rest, the motion of the first is transferred to the second; in that case there is the mass to carry the energy. But light, the carrier of action, has no rest mass; it conveys energy and leaves no residue.
Like the arrow in the symbolism of the archer, it acts to reach a distant goal.

The importance of action emerged when Max Planck discovered that action comes in wholes. That was the discovery that led to quantum theory, a major revolution in physics. These wholes are photons (light), or quanta of action. The unit of action, the product of energy times time, is always the same. The energy may be very small, or it might be very large, but the associated time, which for the photon is its period, is inversely proportional to the energy. It is very short for a photon of high energy, roughly $10^{-22}$ seconds for a photon with enough energy to create a proton, and proportionally long for a very low-energy photon, roughly $1/10$ second for a wavelength close to the circumference of the earth.

Why should light come in wholes? The atomic theory, first enunciated by Democritus, stated that matter comes in wholes, which he called atoms, meaning indivisible units. But it turned out that what he called atoms could be divided or reduced to protons and electrons. These, the only permanent material particles, are in one respect more deserving of the name atoms because they are more fundamental than what we call atoms (hydrogen, oxygen, carbon, etc.). Atoms are the smallest units into which matter can be divided and still keep its identity. Protons and electrons have no identity, and are not truly separate; they are linked by an enormous force, $10^{39}$ times gravity.

However, having come this far, we could ask: What is most fundamental? While proton and electron are more fundamental than atoms, they are still a duality, or more correctly a quadruplicity, because their creation involves antiparticles, antiproton and positron, in which the charges are reversed.

What's that again? Their creation? Yes, and the fact that they are created implies what is yet more fundamental: that which creates them. And that, it turns out, is the photon or quantum of action. Material particles created from action, from pure action! Incredible, yet there it is, a finding from material science. If that isn't a surprise ending to the "whodunit" of science, I don't know what is.

Let's put this together. Of all the things that science deals with, things that can be cut up in pieces, measured, weighed, located, there is one "no thing" that cannot be located, measured, weighed, cannot even be seen without being annihilated, a no thing that is not in space or time. That is action. It comes only in wholes. What does that mean? It means the same as with a human action or decision; you cannot jump out of bed $1.4142$ times or decide to get married $3.9$ times.

This is an unexpected confirmation that we are on the right track. In
looking for the scientific equivalent to purpose, we find that action, which comes in wholes, is the one thing that cannot be divided or measured. That is ontologically satisfactory, because it is only from such a whole that things can begin.

But there is another aspect of the quantum of action that confirms its correlation to purpose or intention. That is uncertainty, and it is difficult to conceptualize. It was Werner Heisenberg who, in 1925, 25 years after the quantum of action was discovered, realized that when we try to locate an electron we must throw light on it, and that disturbs either its position or its momentum. If we use short-wave light to get the position accurately, the large energy of the light disturbs the velocity; if we use long-wave light of low energy we get a less accurate estimate of position. The product of these two inaccuracies or errors is a unit of uncertainty, and this unit has the same formulation, MV times L, as Planck’s quantum of action.

Take your time to consider this enigma; it took science quite a while to get used to it. But save some time for going the next step: to realize that this uncertainty, which is the inability of the observer to predict what is going to happen, is the freedom of what is observed to initiate a new action. Thus the uncertainty of the quantum of action is, or if you prefer, allows, purpose. It is analogous to the blank line on a check where you write in the amount.

Here we must answer the criticism of biologists and philosophers such as C. H. Waddington and Ernst Cassirer, who have insisted that the amount of energy in the quantum of energy is “too small to lift your little finger.” This criticism is a failure to appreciate that all design engineering is based on the use of trigger energy. A machine would be useless if it took as much energy to control as the machine itself provides. That trigger energy can be made arbitrarily small, as in the case of the photoelectric cell that opens the supermarket door.

All living organisms are elaborate hierarchies: muscles controlled by nerves; nerves by chemical bonds; chemical bonds by photons, quanta of action. The principle of trigger energy thus removes the objection that the energy involved in the uncertainty principle is too small to account for free will. As we shall see, the small energy, with its long period, is a necessary condition for the life process to begin.

To review, then, intention is of major import in psychic phenomena. Further, intention can be correlated with the quantum of action. The uncertainty of the quantum of action confirms that correlation, because one’s freedom of decision cannot be predicted by an observer.

The rest of the story falls into place almost of itself. Not only is the quantum of action in the form of photons responsible for all atomic and
molecular interaction and for the very creation of material particles, it is responsible for the purposive thrust of evolution, the continuity without which the universe would be a mere subsiding agitation of billiard balls.

A Model for Consciousness

I have elsewhere (Young, 1976) shown that since the quantum of action is an oscillation or rotation at a certain frequency, we can view each cycle of that rotation as a *cycle of action* that goes through different phases. Note that this emphasis differs from the usual treatment of light as electromagnetic frequency or wavelength. The frequency, or cycles per second, is a property or quantity that can be measured and is extrinsic, whereas the position in the cycle is essentially qualitative, indeterminate, and intrinsic. Were we to think only in terms of frequency, we would have no more reason for associating electromagnetism with consciousness than we would have for associating billiard balls with consciousness, and we could retain the view that all matter is mechanical or electrical and has no relation to consciousness.

But what is consciousness? Obviously it is not a thing. Bertrand Russell said that the class of elephants was not an elephant. In somewhat the same sense, the consciousness of a thing it not a thing, that is, an object in space-time. In fact, one could say that consciousness is what you have when you don't have something. For most actions consciousness is not necessary. It is when intention is not followed automatically by its fulfillment that consciousness ensues.

The nature of consciousness becomes clear if we consider cyclings or frequency, as distinct from position in the cycle. In the case of sound, the note middle C is about 500 cycles per second (cps). If we lower the frequency about five octaves, we can still hear a frequency of 16 cps, about the lowest we can hear as a tone. A still lower frequency becomes a rattle. Imagine the frequency so low that we could watch the violin string moving from one extreme to another. Now imagine that our life spans were shorter than the period of the string. We might see the string beginning as a straight line, get more and more bent, and not know how far it will go, much as we watch the stock market go up and wonder when to sell. At some point it would stop going up and begin to fall. Only after a half-cycle could we begin to form some consciousness of the cyclic behavior of stocks, during which time we might have lost our savings, committed suicide, or even doubled our investment.

This uncertainty is involved in any cycle that is longer than a
person's comprehension, and constitutes the part of life that takes our attention. It is these longer cycles that are of concern, that occupy our consciousness. Shorter, repeating cycles become objects of consciousness, and we don't worry about them. As with sound, the repeating cycle is heard as a single note. Thus each day has its dawn, its noon, and its nightfall; we don't worry about the day ending because there will be a new day tomorrow. Repetition makes it possible to define limits and hence turn unknowns into knowns, freeing consciousness for new problems.

It is the same throughout nature. The high frequencies characteristic of atoms absorbing and radiating photons in a gas are subsumed by lower frequencies corresponding to the binding energy of molecules, and these in turn by still lower frequencies characteristic of cells and multicellular organisms. There is thus a hierarchy of frequencies, with the lower frequencies, or longer periods, controlling the higher.

Planck established that energy times time is an invariant, Planck's constant, \( h \). Thus a longer time is associated with lower energy. Evolution proceeds by a degradation of energy from nuclear particles, with an energy of one billion electron volts, through atoms and on to organic molecules with about 1/25 of an electron volt, the energy of a particle in the temperature range that can support life. The organic molecules responsible for life processes such as metabolism thus are associated with units of action that have very low energy. These quanta constitute a bath of free energy upon which the vital energy can draw.

But why should life begin only after this enormous reduction of energy has occurred? The answer is that the lower energy is the price paid to get more time. That which has the longer time cycle can control cycles shorter than its own. At the molecular level, this makes it possible for the vital energy to avail itself of a wide range of materials for the initiation and direction of the life process.

This becomes apparent if we think of a cycle of action as a learning cycle. The learning cycle has four phases. It begins with (1) a spontaneous or unconscious action, such as a child reaching out and touching a hot stove. The pain causes (2) immediate withdrawal or unconscious reaction, followed by (3) an awareness that the stove caused pain, a conscious reaction, followed by (4) future avoidance of hot stoves, a conscious action, or control. Thus the child learns. If the experience is not learned, the cycle repeats until it is, after which the child moves to a higher level involving more complex or longer-term cycles, always incorporating what he or she has learned and building a hierarchy of automatic reactions controlled by the brain.

Consciousness is always at the leading edge of that growth process,
always pressing on. This lays the basis for higher consciousness. There is a consciousness appropriate for each level of interaction, from that of nuclear particles to that of the higher organisms, and there is no reason to suppose that it stops there.

It is important to point out that the learning cycle includes consciousness and action. No matter how expert we become, we still have something to learn, and that learning or consciousness comes only after an exploratory action has exposed some error. We can then rectify the action and get on with it. The physicist may not be good at philosophy, but he or she can at least make mistakes and possibly learn from them. The philosopher has no way to recognize whether a mistake has been made. The vocabulary of science has shown us that intention has a proper place in the formalism of physics, and by emphasizing the cycle of action it becomes possible to obtain a model for the growth of consciousness, and with it the evolution of life.

**Soul**

Our correlation of intention and consciousness with light, it is important to add, was not a correlation with electromagnetism, which is a theory of light. Nor was it even a correlation with the photon as currently thought of as a particle, but with the cycle of action, which is implicit in both theories but emphasized in neither.

If we are to say that consciousness is \( x \), there must be something known about consciousness and something known about \( x \) that, when equated, cause more to be known about both. Thus to say that consciousness is a different dimension is meaningless. To say that it is light may be intuitively gratifying, but still only a metaphor. But to find from science that the “vibration” of light is a rotation, a cycle of action that goes through mutually opposing phases, and at the same time to recognize consciousness as a byproduct of the learning cycle, which also goes through opposing phases, makes the equation of the cycle of action with the learning cycle not only meaningful but regenerative, in that it causes the interpenetration of one discipline by another.

But that equation is not enough. Perhaps the most difficult part still remains. How does this view of consciousness apply to the question of the continuity of the soul? The correlation just made enables us to see the following:

First, behind the things, molecules, cells, organs, etc., there is some agent that changes the state of molecules, cells, organs, etc. Secondly,
that agent is light, the photon or quantum of energy, which conveys a very small amount of energy that can trigger specific reactions and control their timing. Thirdly, longer-period quanta can control shorter-period quanta, because being longer they can "comprehend" or subsume what is shorter than their own period, and hence control the shorter-period and greater-energy activities of their environment.

Fourthly, degradation of energy, or descent into matter, that produces atoms and then molecules, creates a great variety of molecular material with new combinations forming and dissolving. These combinations are sensitive to temperature. Finally, at this point the stage is set for life. The quanta with the longer period can begin to sort energy, create order, and build organisms. Something comparable to awareness has been present all along, but awareness of cause and effect, which requires a longer period than the cause to take effect, is only now possible.

Life so construed implies evolution, whose higher stages follow. This I discussed in The Reflexive Universe (1976), where I used the idea of the "great chain of being" to support the continuity of a single evolving entity, progressing through increasingly advanced stages of evolution.

The learning cycle, which makes consciousness possible, stores the learning of previous cycles in a memory bank that ceases to be conscious. Thus we learn to spell, then to write, then to type, each stage, when it is learned, becoming automatic and no longer conscious. But we still face the problem of how a distillation of memory can carry over from one lifetime to another through the successive stages of evolution, and for that the soul is a necessary vehicle.

For plants, the "soul memory" is not a factor. The learning cycle at that stage has to do with how cells are manufactured and reproduced. That is a function of deoxyribonucleic acid (DNA), the prototype blueprint that replicates with each generation, and thus ensures continuity of form within the vegetable kingdom. There is thus no "soul" of the plant to survive; it is the pattern of the multicellular plant that survives in the genetic legacy of the species.

In animals the learning cycle produces a program of behavior that survives, when it meets evolutionary requirements, as instinct, in the "group soul" of the species. Instinct thus depends on memory, a program of steps necessary to the successful solutions of problems. That is different from DNA, which is a plan for manufacture, much as the blueprint of an automobile differs from the experience and ability of the driver. The growth and persistence of the group soul makes instinct the evolving principle of the animal kingdom. There the individ-
ual animals, like the multicellular plants, are temporal manifestations and do not endure.

Humans are different still. We use memory, but do not depend on it alone. We can operate by reasoning from premises, which is to say we can recognize laws and use them to increase our scope—in other words, to think for ourselves. Such thinking is not dictated by instinct, but is acquired by personal effort, and the fruits of experience are stored in each individual soul. Recognition is essentially a spiritual activity, and it is spirit that moves and reforms the soul in humans.

That makes it necessary to distinguish spirit from soul. Spirit is the highest function. It manifests in intuition, purpose, the higher self, and other ultimates. Soul is its first vehicle, its access to experience, feelings, and values. Compulsive at first, it learns, with intellect, to serve spirit. It is that principle of the interpenetration of soul and spirit that keeps the light or consciousness from evaporating after death. It is in the nature of light to radiate, and without the soul to retain the values of experience, it would be indeed the smile without the cat.

With our limited understanding of ultimate reality, the correlation of consciousness with light via the cycle of action doesn’t explain the after-death state. I once thought that since the photon was outside of time there was no problem with its endurance, but it could be said that because it is outside of time it does not endure.

In any case the soul and the mind are necessary intermediate principles between spirit, the active site of consciousness, and body. Note that what endures is not mind in the sense of accumulated knowledge, that is, intellect or ego consciousness. Forty years ago I asked the question: "How does the soul grow?" The answer, if there is an answer, is that its growth consists of increased competence and increased profundity and sensitivity. That answer meets the objection that any other modification would narrow its scope. Competence can narrow its focus on some specialization, but it does so without the sacrifice of other abilities. The question of the growth of the soul is of course very important, and I will return to it.

The problem of memory, which is essential to growth, may be even more difficult than the problem of consciousness. Some assume that the computer can store memory. What the computer in fact stores is information that one can retrieve. But the kind of memory that concerns us here draws on experience. It is memory of feeling, of evaluation. It has its basis in emotion and cannot be conveyed by information except insofar as the receiver is moved by the message. That soul
language or *mythos* is the basis of poetry, drama, and other arts, and it draws on symbolism and metaphor, not information.

The standard criticism of the computer is that it cannot feel. The computer enthusiast doesn't put much stock in that objection; he or she would say it is unimportant because feeling is not necessary, or can be encoded. While that is not an answer, the only way to prove that it's not an answer is to unplug the computer. Without a power source the computer cannot function. The power source, unlike the soul, does not evolve, but it does motivate the computer, and hence has for the computer the same role that the soul has for the person or the animal: it makes it go. So we can add motivation as another function of the soul in addition to memory. Related, and necessary to both, is the dimension of time, one definition being "that which promises to fulfill one's expectations." That implies value, and hence attraction and repulsion.

Illusion, a feeling that something is real, is part of this syndrome, but not in the limited and pejorative sense of delusion. Delusion is a mistaken interpretation of reality, but illusion is a necessary ingredient for motivation. If you were to see a movie as a succession of colored photographs of Hollywood actors, without the illusion that makes it a good story, you would not be getting your money's worth. Illusion is *maya* in the Hindu tradition, the "cause of rebirth." For other reasons I have used the word "binding" as descriptive of the soul function. We have the term "spellbinding," which comes from the Anglo-Saxon *speilen*, to tell a story.

In *The Reflexive Universe* (1976), I found that the most difficult part to discuss, let alone prove, was the reality of the soul. Rather than introduce the notion of the soul in the chapter on humans, where other difficult points were to come up, I went into the issue in the chapter on the animal soul. That was where it belonged, to be sure, because the principle that emerges with animals, responsible for the animal power of mobility, is not so much the animal body, a cellular organism like the plant, but the group soul of a particular species. I mentioned Eugene Marais's work on termite colonies, where he found that even if a glass plate were used to separate a section of the colony from the queen, an injury to that section would invoke responses from the entire colony. On the other hand, if the queen were removed, the coordinated activity of the whole colony broke down.

I also mentioned a series of experiments in which William McDougall trained successive generations of rats to go through a maze, and found that the later generations learned faster. But then it was found that rats in Australia, not descended from the trained rats, also learned faster. It was some years later that I read Rupert Sheldrake's
work *A New Science of Life* (1981), in which he devoted a chapter to McDougall's work on rats. Sheldrake used the concept of a "morphogenetic field" to describe how the impress of this learning is transmitted to other rats, but I prefer the idea of a group soul as used by the theosophist Annie Besant. Instinct and learning are programs of behavior, involving sequences of action, and so are not properly represented by a field, which, like a map, describes positions in space rather than in time.

For mankind, the group soul is still a factor, but it becomes something to overcome. Bodies are "government issue." The group soul, which animates the body, is an inheritance from the animal kingdom. Our task or challenge is to learn to think for ourselves, and that requires individuation or ego, what Georg Hegel called "alienation." This means that each person "grows his own," an individual soul that not only survives the body, for the same reason the animal soul survives, but causes and prescribes the next life. What is not resolved in one lifetime continues to motivate the next.

But soul and ego are vehicles: the ego temporary, the soul enduring; ego, the container, soul, the content. That content is distilled into spirit, which is the true focus of human evolution.

The principal reason for my conviction of the reality of the soul and its persistence through time, its immortality, is that the theory of process requires that in any process there must be something that, like mass-energy in physics, is conserved. The word *substance* has been so tortured by the inquisition of the philosophers (Rene Descartes, Baruch Spinoza, Gottfried von Leibnitz, and others) that it says whatever they want it to say. Nevertheless I find it difficult to find another word. But permit me to make a brief reference to my theory of process. That model describes any process as taking place on four levels through which it descends, then turns and ascends to its goal. There are thus seven stages, beginning with purpose and ending with goal. The intermediate stages of this process provide the means necessary to the achievement of this goal. While a five- or even three-stage model might suffice for simplified processes such as elementary communication, the argument for seven stages is put forward in *The Reflexive Universe* (1976).

As indicated in Figure 1, the worldly physical objects we can see, touch, hear, and smell, found at Level IV, result from giving form (Level III) to substance (Level II) according to a purpose (Level I). There are a great many exemplifications of this scheme, one of the most fundamental being the kingdoms of nature, as shown in Figure 2.

Important in the present context is that there is a certain symmetry...
to the arc. The first and seventh stages are on Level I, but the first is goal as potential, and the seventh, goal achieved. The second and sixth stages share substance or value, the second enslaved by attraction, and the sixth able to employ it. For example, the electron, at the second stage, is forced to move by charge, whereas the animal, at the sixth, makes use of attraction, such as in mating rituals. The third stage is
constrained by form, deprived of freedom in exchange for identity; the fifth uses form to organize and to reproduce identity, i.e., progeny.

The soul is Level II. It is liquid in the sense of liquid assets, like money or energy, not coins or bills but value, something real but not a material object. It is also motivation, that which stimulates and drives us over and above necessity. That drive is compulsive at the second stage, and its compulsiveness is overcome at the sixth.

Let us pause for a moment to get our bearings. What am I talking about? The four levels are categories or logical types. When Russell said that the class of elephants was not an elephant, he inaugurated the notion of logical types. Gregory Bateson said that the price of wheat was not an object, and made an important contribution by pointing out instances of confusion caused by failure to distinguish logical types; but he rejected my suggestions of additional logical types. Willard Quine's response to me was that there were arbitrarily many logical types. Russell, by 1938, had lost interest in logical types, and so far as I know, that idea has not been pursued or further developed since he distinguished between a class and its members.

The four levels are an extension of the notion of logical types. Level IV covers objects in the actual world: elephants, chairs, etc. Level III consists of concepts: the class or concept of "elephants" or "chairs."

Level II is the value and need for something, for elephants or chairs. It is what motivates us with regard to a thing, but it also covers what motivates the thing itself, as well as the material, the substance of which the thing is made. If that correlation is difficult (and Level II, being nonconceptual, is difficult to grasp), note that ordinary language uses the word "matter" to indicate substance as well as value: "such and such does not matter."

Level I is the purpose of an object, or the purpose we use it for. We could use a chair to stand on; the lion trainer uses it to keep the lion from attacking him. Because purpose is a free option, it cannot be defined or conceptualized. But therein lies its power: the value (Level II) of something is established by the purpose (Level I) for which it is used.

Quine said that there were arbitrarily many logical types. He may have based that on the fact that elephants belong to a larger class of mammals, and mammals to a still larger class of vertebrates. But these larger classes are not different logical types; they are still classification.

The contribution of the four levels to the question of the soul is that they enable us to get past the limits of conceptualization. We can admit the existence, or rather the importance, of aspects of reality that are
not known through sense data or capable of definition. In fact, Levels I and II are both preconceptual, and both are nonobjective, that is, neither objects of sense experience (as in Level IV) nor concepts (as in Level III).

I have already given the value of money as an example of Level II. We can draw from science a number of its most fundamental notions, such as force, charge, and energy, and show how those too share this projective, nonconceptual nature.

Survival

One of the most fundamental principles of materialist science is the principle of conservation of mass-energy. The conservation of mass and the conservation of energy were initially two principles. They became one when it was recognized that mass and energy are interchangeable.

Now I usually use the conservation of mass-energy to support the immortality of the soul. Thus Level II is *substance*, which is formed by Level III to make *objects*, Level IV. Such objects, including our physical bodies and all things constructed by man, buildings, machines, etc., as well as plants and animals, can be destroyed, can die. Human cells have not only a built-in lifetime, but a predetermined limit to the number of times they can reproduce; thus a new organism will not continue to reproduce longer than its parent.

So if everything that can be constructed can be destroyed or destructured, how can the soul be immortal? The answer is that it is not constructed. Structure arises at Level III. The soul is simple substance, energy if you like, and if energy is conserved, so is the soul.

If we liken energy to the substance of the soul, we could liken mass to its troubles, its traumas, condensations of the otherwise free energy of the psyche. This would imply that memory is analogous to mass. Pursuing that tack we would see memory as the investment of free energy in what we would call the furniture of the self. Its sex, its identity, its position in the social structure (profession, avocation, and political, religious, and other affiliations) can be seen as concrete impediments, acquisitions necessary for living in the world but, in the last analysis, frozen or trapped energy that can become so burdensome that the soul gets stuck in matter, or in patterns of behavior or role playing, and can progress further only by dissolving its embodiments and regaining its freedom.

But the question still remains: How can the soul grow under the principle of conservation of mass-energy? We must remember that the soul is a *means*, and the question is not so much that of its own growth
as it is of its alignment with, and suffusion by, spirit. It was the hunger of soul that initiated manifestation, eating the fruit of the tree, and when that hunger is appeased, the monad can move on toward its goal.

We cannot expect to resolve or even describe this advanced state from our present perspective. However, we can make use of evidence available from the stages of process. What I have not mentioned here, but did develop in *The Reflexive Universe* (1976), is that each of the seven stages of process has substages that partake of the same nature as the stages. An interesting finding in this context is that all seventh substages depend on the next stage. Thus, at the seventh substage of the atomic kingdom, the disintegration rate of radioactive atoms can be controlled by molar concentration; seventh substage molecules, DNA and virus, depend on cells for their replication; seventh substage flowering plants depend on insects.

Extrapolating from this, we can anticipate that human evolution, beyond the purely animal necessity of survival, is dependent on, and interrelated with, what is beyond mankind: superbeings or gods. And it is pertinent here that a belief in powers of a higher order, in gods or in a god, has characterized almost all peoples and cultures. The possible exception is modern Western culture, where the belief in science has tended to supplant the belief in gods.

As we are dealing with first principles, it is important to note that the difficulty involved is due not just to the intrusion of religion into science, but to the inversion of cause and effect. Our whole learning experience in the world is that a cause precedes the effect, and science is based on that self-evident axiom. So in these examples of a dependency on the next kingdom, something not yet there, we are going against what is reasonable or natural.

This comes to the fore in the case of human evolution. The concept of survival of the fittest, while deficient in that it does not explain how jumps to higher orders of evolution can occur, makes sense insofar as survival puts a premium on some forms versus others. With individual human evolution, the goal of survival is not sufficient. There has to be some transfinite dedication, some dedication to goals beyond the limit of a lifetime.

It might be said that there is already some evidence of this in animals in their care of their young, but that could be accounted for by instinct. The evolution of individual persons, which as we have pointed out is necessarily self-initiated, cannot be accounted for by instinct nor by DNA. It is learning to think for oneself that is essential to human evolution.

In this matter we should be on the lookout for clues from whatever source, and despite the fact that theosophists are currently in poor
repute, I would like to mention that it was one of their claims that pet animals, by devotion to their masters, often are making the first step toward their evolution as persons. Devotion is above and beyond the requirements of necessity, and it paves the way for a different kind of evolution from that of the animal principle.

Whether that is true or not, it leads in the right direction, in that the emphasis is on emotion and motivation, Level II principles, which are not dealt with by science because its policy confines it to the objective, physical world of measurement and relationship structure. We are in fact dealing with things larger than ourselves, while science can deal only with what it can control.

This takes us back to my finding, described in the first part of this article, that intention is of major importance in the practice of healing, dowsing, and other psychic phenomena. I do not know whether there are other unrecognized types of energy, but in any case such energies, as well as those recognized by science, are directed and controlled by intention.

Intention has its correlates in the measure formulas of physics in action, the product of energy times time. It is the essence of selfhood, the elan vital of Henri Bergson. It is not a different kind of energy; it is the principle that directs energy. In reference to its formulation as energy times time, one may think of the time component as timing, equivalent to direction. In other words, a cycle can be thought of as taking place in time or space; timing is the phase or direction in that cycle.

We can now go a step further and correlate intention to spirit. Soul is the first precipitation of this spirit or essence into temporal being, into the world of becoming. Like Eve, it is the mother of all living, the matter or substance that can take on forms and produce the world of physical molecules that makes life possible.

The means, substance (soul), and the formed embodiments of substance, are thus first made available and then used by spirit to achieve knowledge of itself, not only through gaining competence in organizing matter, but through the transformation of meaning into the more imperishable values of the soul: the true, the good, and the beautiful.

References


Development of the Near-Death Phenomena Knowledge and Attitudes Questionnaire

Nina R. Thornburg, R.N., M.S.N.
Massachusetts College of Pharmacy and Allied Health Sciences

ABSTRACT: In the first study of nurses' knowledge of and attitudes toward near-death phenomena and patients who have experienced them (NDErs), 20 registered nurses in Intensive or Cardiac Care Units completed a questionnaire containing 29 true/false/undecided statements about near-death phenomena (alpha reliability .83), 29 Likert items concerning attitudes toward such phenomena (alpha .84), and 25 Likert items concerning attitudes toward care of NDErs (alpha .81). The revised questionnaire has high levels of content and construct validity, and acceptable levels of internal consistency, and is therefore a valid and reliable tool.

The near-death experience (NDE) is a clinical event with significant implications for the patient, and needs to be recognized and understood by health care professionals who care for these patients. However, nurses working with critically ill patients have limited knowledge about NDEs. Annalee Oakes (1981, p. 77) stated that "critical care team members are only beginning to know about these phenomena and how they might be used in patient care plans." Studies dealing with nurses' knowledge of and attitudes toward near-death phenomena and NDErs do not exist in the literature. Due to the lack of attention to...
this topic, in order to carry out the study of the problem an appropriate instrument to assess the knowledge level and attitudes of nurses needed to be developed. Therefore, the purpose of this study was to develop a reliable and valid instrument to measure (a) nurses' knowledge of near-death phenomena, (b) nurses' attitudes toward near-death phenomena, and (c) nurses' attitudes toward care of patients who have had NDEs.

**Literature Review**

Review of the literature revealed that near-death phenomena consist of a core experience, of which some or all of its 15 components as designated by Raymond Moody (1975) may occur during critical illness.

Kenneth Ring (1980) studied 102 persons using a structured interview schedule that asked a series of probing questions designed to determine the presence or absence of the various components of the core experience as described by Moody. Ring constructed an NDE index, called the Weighted Core Experience Index (WCEI), based on Moody's analysis of the core experience. Scores on the WCEI ranged from 0, indicating an absence of any NDE, to twenty-nine. Independent investigators (Ring, 1980; Sabom, 1982) have found that a score of 6 or higher on the index is evidence of an NDE. The index indicated a core experience incidence rate of 48% in Ring's study. However, the data indicated that core experience incidence may vary as a function of the manner of coming near death, so the core experience incidence rate may differ with different samples.

George Gallup (1982) studied American beliefs and conceptions of life after death, through a survey of 1,500 adult Americans. According to Gallup, about one of every seven adult Americans has been close to death at least once, and approximately five percent of our population has had an NDE; that is, approximately 35% of individuals who come close to death reported NDEs.

Near-death research in the past few years has focused on the interpretation of NDEs. Stuart Twemlow, Glen Gabbard, and Fowler Jones (1982) described 34 NDEs and concluded that subjects who had had NDEs did not differ from control subjects in terms of psychological health or background.

Bruce Greyson (1981, 1983) proposed several psychological interpretations of NDEs that can encompass the paranormal components
and beneficial effects of NDEs. He concluded that NDEs may serve a number of psychological functions.

James Lindley, Sethyn Bryan, and Bob Conley (1981) reported a study of 50 NDEs and concluded that NDEs are not influenced by demographic factors, that NDEs produce profound positive personality changes, and that parts of the NDE may be related to endorphins. Daniel Carr (1981, 1982) proposed that certain NDE characteristics are suggestive of a limbic lobe syndrome and may be precipitated in a near-death state by the release of beta-endorphins, giving rise to clinical symptoms such as depersonalization, involuntary memory recall, intense emotions, and hallucinations.

**Instrument Development**

This study was methodological in focus, and was concerned with developing, validating, and determining reliability of an instrument to identify nurses' knowledge of near-death phenomena, attitudes toward those phenomena, and attitudes toward care of patients who have had NDEs.

The instrument was tested in the Medical Special Care Unit (MSCU), the Burn Special Care Unit (BSCU), and the Surgical Intensive Care Unit (SICU) at a large midwestern medical center.

The target population of the study consisted of all registered nurses (RNs) currently employed in Intensive Care Units (ICUs) or Cardiac Care Units (CCUs). The accessible population consisted of all RNs currently employed in ICU/CCU departments at the medical center. A convenience sampling procedure was used for the study, whereby all available RNs in each ICU were studied: 6 from the SICU, 9 from MSCU, and 5 from the BSCU. A total of 20 RNs were included in the study. Subjects were contacted individually while on duty, and were asked to complete the questionnaire and return it to the investigator immediately. Effort was made to include as many RNs as possible from each unit by including RNs from all three shifts.

The literature was reviewed in order to construct specific items for each scale in the questionnaire. The items constructed were reviewed for content validity by experts in the disciplines of nursing, sociology, and psychology. Items deemed ambiguous or inappropriate were reworked or discarded. Item components established for the knowledge scale were (a) elements of the NDE; (b) predisposing and precipitating factors of NDEs; (c) sequelae of NDEs; and (d) possible etiologies of NDEs.
Item components of the attitude toward near-death phenomena scale were (a) possible etiologies of NDEs; (b) near-death education in nursing school; (c) nurses’ participation in the health care team; and (d) nurses’ role in educating patients about NDEs.

Item components of the attitude toward patient care scale were (a) nurses’ role in caring for patients who have had NDEs; (b) relevance of NDEs to nursing practice; and (c) implications of NDEs for nursing.

The questionnaire was composed of 29 knowledge statements dealing with near-death phenomena in a true/false/undecided format, 29 attitude statements in a Likert format dealing with near-death phenomena, and 25 attitude statements in a Likert format dealing with care of patients who have had NDEs. For the attitude scales in the questionnaire, composed of positive and negative statements toward near-death phenomena and care of patients who have had NDEs, subjects could respond “strongly agree,” “agree,” “undecided,” “disagree,” or “strongly disagree.” For positive statements, “strongly agree” received a score of 5; for negative statements, “strongly disagree” received a score of five.

A review of the literature also suggested relevant demographic data to be included in the study: subjects’ age, sex, education, religion, religiosity, personal NDE, and length of experience in ICU/CCU nursing.

Because reliability and validity for the instrument had not been established, and because of the lack of nursing literature concerning near-death phenomena, open-ended questions were included. The purpose of these questions was to establish each subject’s current knowledge of near-death phenomena, and to enable the subjects to describe any questions, thoughts, or feelings raised by the questionnaire.

None of the subjects had ever had a personal NDE, but 19 subjects (95%) indicated they had heard about NDEs before participating in the study. When asked to describe a NDE in their own words, the subjects mentioned an average of 2.75 of Moody’s (1975) 15 elements of the NDE; the largest number of elements identified by any subject was 7.

Table 1 shows the number and percent of subjects who named each of the 15 elements. As shown in the table, 17 subjects (85%) described the out-of-body experience as part of an NDE; 9 subjects (45%) described a “being of light” as a bright light, God, or heaven; and 0 subjects mentioned ineffability, the life review, or new views of death as being part of the NDE.

Responses to the open-ended questions were varied, ranging from “fascinating—I’d like to know more about NDEs” to “I don’t see how this can help anyone.” Three subjects questioned the effect of drugs
Table 1
Elements of Near-Death Experiences Mentioned by Subjects (N = 20)

<table>
<thead>
<tr>
<th>Element</th>
<th>Na</th>
<th>%b</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ineffability (difficulty describing experience)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. hearing the news</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>3. feelings of peace and quiet</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>4. the noise</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>5. the dark tunnel</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>6. the out-of-body experience</td>
<td>17</td>
<td>85</td>
</tr>
<tr>
<td>7. meeting others</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>8. the Being of Light</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>9. the life review</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. the border or limit</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>11. coming back</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>12. telling others</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>13. effects on lives</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>14. new view of death</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15. corroboration of events</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>

*a column totals more than 20 because respondents could mention more than one element

*b column totals more than 100% because respondents could mention more than one element

and/or alcohol on the NDE and the relationship between suicide and NDEs. One subject asked how to ask patients if they have had an NDE; another wondered whether nonNDErs felt threatened by people who had had NDEs; and a third asked whether a NDE should be noted in the patient’s chart or kept confidential.

Reliability and Validity of the Instrument

Internal consistency of the scales was evaluated by determination of Cronbach’s coefficient alpha, using the Statistical Package for the Social Sciences (SPSS) program for reliability. Alpha reliabilities were .83 for the knowledge scale, .84 for the attitude toward near-death phenomena scale, and .81 for the attitude toward patient care scale.

One pair of responses was included in each scale to check reliability of subject response. Item analysis revealed that those statements had positive correlations of .59 for the knowledge scale, .48 for the attitude
toward near-death phenomena scale, and .38 for the attitude toward patient care scale.

Content validity of the questionnaire was maximized by the process by which the items were derived. Experts in the field of near-death phenomena reviewed the items to determine whether they adequately represented the content of near-death phenomena.

Construct validity of each scale was evaluated by factor analysis using the SPSS program for principal factoring with varimax rotation.

Knowledge Scale

The 29 items of the knowledge scale were factored together, and resulted in four factors accounting for 56.9% of the variance, as indicated in Table 2. The four components of the knowledge scale that were established a priori (see above) were compatible conceptually with the subscales obtained by the factor analysis. The components of the knowledge scale that were established, however, were found to be conceptually ambiguous, while the factors obtained by factor analysis were conceptually clearer, and were labeled as follows: (a) knowledge of the NDE itself; (b) causes and correlates of the NDE; (c) concomitant events and activities associated with the NDE; and (d) knowledge about NDErs' perceptions.

Six items on the knowledge scale (items 1, 7, 9, 18, 19, and 28) did not clearly relate conceptually to any of the four factors, and had factor loadings of less than .52; those items were eliminated from the scale.

Cronbach alpha reliabilities were run on the 23-item knowledge scale in order to test the internal consistency of the subscales. Reliability coefficients were .84 for the knowledge of the NDE itself subscale, .77 for the causes and correlates of the NDE subscale, .72 for the concomitant events or activities associated with NDEs subscale, and .72 for the knowledge about NDErs' perceptions subscale; all four of these subscales showed acceptable levels of internal consistency.

Attitude Toward Near-Death Phenomena Scale

The 29 items of the attitude toward near-death phenomena scale were factored together, and yielded four factors accounting for 58.4% of the variance. The four components of the attitude toward near-death phenomena scale that were established a priori (see above) were compatible conceptually with the subscales obtained by the factor
Table 2
Factor Loadings for Principal Factoring with Varimax Rotation of Knowledge Scale

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Knowledge of NDE</th>
<th>Causes and Correlates</th>
<th>Concomitant Events</th>
<th>Person's Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The NDE is a manifestation of a toxic psychosis induced in the oxygen-starved brain of a dying individual.</td>
<td>.28</td>
<td>.09</td>
<td>.45</td>
<td>-.21</td>
</tr>
<tr>
<td>2. NDEs occur only near death.</td>
<td>.45</td>
<td>*-.61</td>
<td>.14</td>
<td>.05</td>
</tr>
<tr>
<td>3. External events described by the NDE survivor can often be corroborated by those people who participated in the resuscitation.</td>
<td>.02</td>
<td>-.04</td>
<td>*.57</td>
<td>*-.54</td>
</tr>
<tr>
<td>4. A point may be described by the NDE survivor where the person was told or had the choice to return to his body.</td>
<td>.44</td>
<td>-.30</td>
<td>.23</td>
<td>*.68</td>
</tr>
<tr>
<td>5. Suicide attempters have lower incidences of NDEs than those who have NDEs triggered by illness or accident.</td>
<td>.35</td>
<td>*.71</td>
<td>.30</td>
<td>.00</td>
</tr>
<tr>
<td>6. Alcohol intoxication while close to death has no effect on occurrences of NDEs.</td>
<td>*-.57</td>
<td>*.57</td>
<td>.34</td>
<td>.03</td>
</tr>
<tr>
<td>7. Most patients remember nothing from during the time they were unconscious.</td>
<td>.01</td>
<td>-.01</td>
<td>.05</td>
<td>-.49</td>
</tr>
<tr>
<td>8. People who have NDEs describe their experiences in practically the same terms.</td>
<td>*.72</td>
<td>.14</td>
<td>-.11</td>
<td>.12</td>
</tr>
<tr>
<td>9. Negative attitude and personality changes have been reported as a result of NDEs.</td>
<td>.33</td>
<td>.03</td>
<td>.27</td>
<td>-.01</td>
</tr>
<tr>
<td>10. Most people who have NDEs are eager to tell others about it because of the beauty and peace encountered during the experience.</td>
<td>-.12</td>
<td>.08</td>
<td>.21</td>
<td>*.80</td>
</tr>
<tr>
<td>11. Suicide-induced NDEs are unpleasant.</td>
<td>.06</td>
<td>*.65</td>
<td>-.14</td>
<td>.08</td>
</tr>
</tbody>
</table>

% variance: 21.8 15.0 10.4 9.7
Cumulative % variance: 21.8 36.8 47.2 56.9
Correlation coefficients > .51 are starred
Table 2 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation of Knowledge Scale

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</thead>
<tbody>
<tr>
<td>12. NDEs are caused by therapeutic drugs administered to a person at the time he is near death.</td>
<td>-.11</td>
<td>-.05</td>
<td>*.65</td>
<td>.14</td>
</tr>
<tr>
<td>13. NDEs are a way of defending against the anxiety of dying.</td>
<td>.04</td>
<td>.41</td>
<td>*.57</td>
<td>.35</td>
</tr>
<tr>
<td>14. People are accurately able to describe their resuscitation, even though they are thought to be dead.</td>
<td>.04</td>
<td>.07</td>
<td>*.63</td>
<td>.27</td>
</tr>
<tr>
<td>15. Cross-cultural comparisons of NDEs show significant differences in the reports of NDEs made by individuals with differing cultural backgrounds.</td>
<td>.36</td>
<td>.42</td>
<td>-.19</td>
<td>*.66</td>
</tr>
<tr>
<td>16. Over 80% of NDE survivors report a greater appreciation for life and of attempting to live more fully following a NDE.</td>
<td>*.80</td>
<td>.03</td>
<td>.22</td>
<td>.12</td>
</tr>
<tr>
<td>17. There are no significant differences between NDEs related by those who are not given drugs and NDEs related by those who are given drugs.</td>
<td>.32</td>
<td>.18</td>
<td>*.69</td>
<td>.20</td>
</tr>
<tr>
<td>18. The more religious an individual the more likely he would be to have a NDE.</td>
<td>.51</td>
<td>-.24</td>
<td>.21</td>
<td>-.14</td>
</tr>
<tr>
<td>19. Individual interpretation of the content of NDEs is influenced by previous religious background.</td>
<td>.45</td>
<td>.21</td>
<td>.01</td>
<td>.25</td>
</tr>
<tr>
<td>20. NDE survivors attend church more often following a NDE.</td>
<td>*.61</td>
<td>.05</td>
<td>-.30</td>
<td>.06</td>
</tr>
<tr>
<td>21. People who have NDEs have difficulty putting their experiences into words.</td>
<td>.43</td>
<td>-.36</td>
<td>.11</td>
<td>*.64</td>
</tr>
</tbody>
</table>

<p>| % variance | 21.8 | 15.0 | 10.4 | 9.7 |
| cumulative % variance | 21.8 | 36.8 | 47.2 | 56.9 |
| correlation coefficients &gt; .51 are starred | | | | |</p>
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<th>Person's Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. The NDE has been described as being peaceful, quiet, and without sensation of pain.</td>
<td>.80</td>
<td>.07</td>
<td>.00</td>
<td>-.27</td>
</tr>
<tr>
<td>23. Approximately 50% of those who have been close to death due to illness or accident have NDEs.</td>
<td>.21</td>
<td>* .65</td>
<td>.10</td>
<td>.02</td>
</tr>
<tr>
<td>24. Alcohol intoxication while close to death diminishes the likelihood of a NDE.</td>
<td>.06</td>
<td>* .65</td>
<td>.43</td>
<td>.08</td>
</tr>
<tr>
<td>25. People who take LSD have similar experiences to those who have NDEs when close to death.</td>
<td>.10</td>
<td>* .80</td>
<td>-.08</td>
<td>-.47</td>
</tr>
<tr>
<td>26. The impact of NDEs has been to increase the suicide rate because the NDE is so pleasant and peaceful.</td>
<td>-.08</td>
<td>.12</td>
<td>* .74</td>
<td>-.27</td>
</tr>
<tr>
<td>27. The NDE has a powerful effect on a patient's subsequent belief in an afterlife.</td>
<td>* .74</td>
<td>.07</td>
<td>.13</td>
<td>.44</td>
</tr>
<tr>
<td>28. Movement through a dark tunnel with a bright light at the end is the element most often described by those who have NDEs.</td>
<td>-.02</td>
<td>.07</td>
<td>-.12</td>
<td>.01</td>
</tr>
<tr>
<td>29. A complete panoramic review of one's life in a short amount of time is undergone by the individual during the NDE.</td>
<td>* .69</td>
<td>.37</td>
<td>.36</td>
<td>.10</td>
</tr>
</tbody>
</table>

| % variance | 21.8 | 15.0 | 10.4 | 9.7 |
| cumulative % variance | 21.8 | 36.8 | 47.2 | 56.9 |
| correlation coefficients > .51 are starred | | | | |

Table 2 (continued)

analysis, the results of which are shown in Table 3. As with the knowledge scale, however, the components of the attitude toward near-death phenomena scale that were established were found to be conceptually ambiguous, while the components obtained by factor analysis were conceptually clearer. Factors identified for the attitude toward near-death phenomena scale were labeled as follows: (a) reporting
Table 3
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Near-Death Phenomena Scale

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reporting NDEs</td>
</tr>
<tr>
<td>1. Patients who have near-death experiences need to share their experiences.</td>
<td>.48</td>
</tr>
<tr>
<td>2. Patients who are on drugs or intoxicated are more likely to have NDEs than those who are not.</td>
<td>.39</td>
</tr>
<tr>
<td>3. Students should be encouraged to carry out research dealing with near-death phenomena.</td>
<td>*.67</td>
</tr>
<tr>
<td>4. If a patient tells me an extraordinary death experience, I should not document the patient's report of the experience in the chart.</td>
<td>-.35</td>
</tr>
<tr>
<td>5. Patients who arrest are able to remember what happens to them during CPR.</td>
<td>-.04</td>
</tr>
<tr>
<td>6. Patients who have had NDEs should be invited to participate in inservice conferences to relate their experiences.</td>
<td>*.71</td>
</tr>
<tr>
<td>7. A course dealing with near-death phenomena should be available to nursing students.</td>
<td>*.55</td>
</tr>
<tr>
<td>8. Some patients are reluctant to report their NDEs.</td>
<td>-.02</td>
</tr>
<tr>
<td>9. Nurses should document the patient's report of a NDE in the chart.</td>
<td>.00</td>
</tr>
<tr>
<td>10. Most people who have NDEs have underlying psychological problems.</td>
<td>.30</td>
</tr>
</tbody>
</table>

| % variance | 24.8 | 14.2 | 10.4 | 9.0  |
| cumulative % variance | 24.8 | 39.0 | 49.4 | 58.4 |
| correlation coefficients > .51 are starred |
**Table 3 (continued)**

**Factor Loadings for Principal Factoring with Varimax Rotation of Attitude Toward Near-Death Phenomena Scale**

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Reporting NDEs</th>
<th>Influencing/ Affecting Care</th>
<th>Psychological Implications</th>
<th>Nursing Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. There is really very little that can be done to help a patient who has a NDE.</td>
<td>-.01</td>
<td>.38</td>
<td>-.05</td>
<td>-.33</td>
</tr>
<tr>
<td>12. Stories I have heard about near-death phenomena frighten me.</td>
<td>.17</td>
<td>-.10</td>
<td>*.64</td>
<td>-.12</td>
</tr>
<tr>
<td>13. People's lives are changed very little, if at all, as a result of their NDEs.</td>
<td>.43</td>
<td>.05</td>
<td>.07</td>
<td>-.13</td>
</tr>
<tr>
<td>14. Patients who report NDEs actually have these experiences.</td>
<td>*.70</td>
<td>.25</td>
<td>.40</td>
<td>.11</td>
</tr>
<tr>
<td>15. Students should not be allowed to work with patients who report NDEs.</td>
<td>.04</td>
<td>.11</td>
<td>*.62</td>
<td>-.23</td>
</tr>
<tr>
<td>16. There is too much emphasis on NDEs in the nursing literature.</td>
<td>.37</td>
<td>-.24</td>
<td>.38</td>
<td>-.04</td>
</tr>
<tr>
<td>17. Students would very likely benefit from taking a course dealing with near-death phenomena.</td>
<td>-.13</td>
<td>*-.52</td>
<td>.28</td>
<td>-.17</td>
</tr>
<tr>
<td>18. Nurses should be the first people to hear patients' NDE reports.</td>
<td>-.07</td>
<td>.10</td>
<td>-.17</td>
<td>*.71</td>
</tr>
<tr>
<td>19. Continuing education programs should be developed to help nurses work with patients who have had NDEs.</td>
<td>*.80</td>
<td>.26</td>
<td>.21</td>
<td>.29</td>
</tr>
<tr>
<td>20. Most people who have NDEs read something about NDEs before actually having the experience.</td>
<td>.14</td>
<td>*.60</td>
<td>.20</td>
<td>-.19</td>
</tr>
<tr>
<td>21. An inservice conference on near-death phenomena is a waste of valuable time.</td>
<td>*.79</td>
<td>.38</td>
<td>.16</td>
<td>.15</td>
</tr>
</tbody>
</table>

| % variance | 24.8 | 14.2 | 10.4 | 9.0 |
| cumulative % variance | 24.8 | 39.0 | 49.4 | 58.4 |
| correlation coefficients > .51 are starred |
Table 3 (continued)

Factor Loadings for Principal Factoring with Varimax Rotation of Attitude Toward Near-Death Phenomena Scale

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Reporting NDEs</th>
<th>Influencing/Reporting Affecting Care</th>
<th>Psychological Implications</th>
<th>Nursing Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Courses dealing with near-death phenomena should not be included in nursing school curricula.</td>
<td></td>
<td>.56</td>
<td>-.31</td>
<td>.13</td>
</tr>
<tr>
<td>23. The more religious a patient is, the more likely he will be to have a NDE.</td>
<td></td>
<td>.44</td>
<td>.27</td>
<td>-.01</td>
</tr>
<tr>
<td>24. Most of what patients remember of their NDEs is wishful thinking.</td>
<td></td>
<td>.56</td>
<td>.09</td>
<td>.64</td>
</tr>
<tr>
<td>25. Patients who report NDEs should automatically be referred to a psychiatrist.</td>
<td></td>
<td>.61</td>
<td>-.15</td>
<td>.58</td>
</tr>
<tr>
<td>26. Patients need to be reassured that their NDEs are normal, and do not indicate psychological imbalance.</td>
<td></td>
<td>-.10</td>
<td>.19</td>
<td>.86</td>
</tr>
<tr>
<td>27. Nurses should inform the patient's physician if a NDE occurs.</td>
<td></td>
<td>.28</td>
<td>*.76</td>
<td>-.15</td>
</tr>
<tr>
<td>28. Nurses should ask patients who survive a cardiopulmonary arrest if they remember anything during the time they were clinically &quot;dead.&quot;</td>
<td></td>
<td>.30</td>
<td>-.10</td>
<td>-.17</td>
</tr>
<tr>
<td>29. Long-range psychological and emotional support should be offered for those who have NDEs.</td>
<td></td>
<td>.12</td>
<td>*.71</td>
<td>.05</td>
</tr>
</tbody>
</table>

| % variance | 24.8 | 14.2 | 10.4 | 9.0 |
| cumulative % variance | 24.8 | 39.0 | 49.4 | 58.4 |
| correlation coefficients > .51 are starred |

NDEs; (b) factors influencing or affecting care; (c) psychological implications of NDEs; and (d) patient care activities surrounding NDEs.

Six items on the attitude toward near-death phenomena scale (items 1, 2, 11, 13, 16, and 23) did not clearly relate conceptually to any of the four factors and had factor loadings of less than .52; those items were eliminated from the scale.
Cronbach alpha reliabilities were run on the 23-item attitude toward near-death phenomena scale in order to test internal consistency of the subscales. Reliability coefficients were .90 for the reporting NDEs subscale, .70 for the factors influencing or affecting care subscale, .80 for the psychological implications of NDEs subscale, and .73 for the patient care activities surrounding NDEs subscale; all four subscales showed acceptable levels of internal consistency.

**Attitude Toward Patient Care Scale**

The 25 items of the attitude toward patient care scale were factored together, and yielded three factors accounting for 53.4% of the variance. The three components of the attitude toward patient care scale that were established *a priori* were compatible conceptually with the subscales obtained by the factor analysis, the results of which are shown in Table 4. As with the other scales, however, the components of the attitude toward patient care scale that were established were found to be conceptually ambiguous, while the factors obtained by factor analysis were conceptually clearer. Factors identified for the attitude toward patient care scale were labeled as follows: (a) importance of nurses’ attitudes to patient care; (b) patients’ perceptions of their NDEs; and (c) nurses’ awareness of the effect of NDEs on patients.

Five items on the attitude toward patient care scale (items 3, 4, 11, 16, and 17) did not clearly relate conceptually to any of the three factors and had factor loadings less than .52; those items were eliminated from the scale.

Cronbach alpha reliabilities were run on the 20-item attitude toward patient care scale in order to test the internal consistency of the subscales. Reliability coefficients were .92 for the importance of nurses’ attitudes to patient care subscale, .76 for the patients’ perceptions of their NDEs subscale, and .70 for the nurses’ awareness of the effect of NDEs on patients subscale; all four subscales showed acceptable levels of internal consistency.

**Discussion**

The Near-Death Phenomena Knowledge and Attitude Questionnaire requires further reliability and validity testing. In this study, alpha reliability coefficients provided indices of the instrument’s internal consistency, but not of the instrument’s stability over time. Neither
Table 4
Factor Loadings for Principal Factoring with Varimax Rotation of Attitude Toward Care Scale

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Importance of Nurses' Attitudes</th>
<th>Patients' Perceptions</th>
<th>Nurses' Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monitoring the patient's physical condition is more important in the ICU than psychological support.</td>
<td>.40</td>
<td>.04</td>
<td>*.59</td>
</tr>
<tr>
<td>2. An inservice program on NDEs would be a waste of time.</td>
<td>*.87</td>
<td>.13</td>
<td>-.08</td>
</tr>
<tr>
<td>3. Knowledge of NDEs can be used to deter suicide.</td>
<td>.17</td>
<td>.17</td>
<td>.33</td>
</tr>
<tr>
<td>4. Patients who are preoccupied with the concept of a more beautiful existence after death should be considered suicide risks.</td>
<td>-.02</td>
<td>-.14</td>
<td>.51</td>
</tr>
<tr>
<td>5. Patients are often aware of the code team and its resuscitation activities even after respiration and circulation cease.</td>
<td>.13</td>
<td>.09</td>
<td>*.66</td>
</tr>
<tr>
<td>6. Patients who have NDEs should have the same quality of care as patients who do not have NDEs.</td>
<td>*.55</td>
<td>.25</td>
<td>.17</td>
</tr>
<tr>
<td>7. Patients who have NDEs should be transferred to a psychiatric floor as soon as possible.</td>
<td>*.75</td>
<td>.36</td>
<td>.13</td>
</tr>
<tr>
<td>8. Nurses should not postpone talking about NDEs with a patient even if his clinical condition is unstable.</td>
<td>.04</td>
<td><strong>-.52</strong></td>
<td>.00</td>
</tr>
<tr>
<td>9. Nurses should not interview post-CPR patients about their NDEs without supervision of a physician.</td>
<td>-.10</td>
<td>.32</td>
<td><strong>-.79</strong></td>
</tr>
<tr>
<td>10. I should listen attentively to any NDE report and allow the patient to complete the story.</td>
<td>*.59</td>
<td>.00</td>
<td>*.67</td>
</tr>
<tr>
<td>11. It is dangerous for suicidal patients to read NDE accounts.</td>
<td>.03</td>
<td>.38</td>
<td>-.31</td>
</tr>
<tr>
<td>12. Patients who are preoccupied with their NDEs should be referred for professional help.</td>
<td>.16</td>
<td><strong>.67</strong></td>
<td>-.05</td>
</tr>
<tr>
<td>13. Dying patients would benefit from hearing another person's NDE.</td>
<td>-.11</td>
<td><strong>.70</strong></td>
<td>.33</td>
</tr>
<tr>
<td>14. Patients should be able to share their feelings and recollections about their NDEs with whomever they feel most comfortable.</td>
<td><strong>.74</strong></td>
<td>.06</td>
<td>.49</td>
</tr>
</tbody>
</table>

% variance: 29.6 15.1 8.7
Cumulative % variance: 29.6 44.7 53.4
Correlation coefficients > .51 are starred.
Table 4 (continued)
Factor Loadings for Principal Factoring with Varimax Rotation
of Attitude Toward Care Scale

<table>
<thead>
<tr>
<th>Statement Item</th>
<th>Importance of Nurses' Attitudes</th>
<th>Patients' Perceptions</th>
<th>Nurses' Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. I would attend a near-death education program in my hospital.</td>
<td>.89</td>
<td>-.11</td>
<td>.08</td>
</tr>
<tr>
<td>16. My reactions to near-death phenomena would be different if one of my immediate family reported a NDE.</td>
<td>.30</td>
<td>-.08</td>
<td>.27</td>
</tr>
<tr>
<td>17. Patients who survive a cardio-pulmonary arrest should be directly questioned by nurses regarding the occurrence of a NDE.</td>
<td>-.06</td>
<td>-.42</td>
<td>.18</td>
</tr>
<tr>
<td>18. It is important for me to be nonjudgmental of what I hear no matter how incredible it may sound.</td>
<td>.76</td>
<td>-.07</td>
<td>.24</td>
</tr>
<tr>
<td>19. Patients who survive CPR should be encouraged to report their NDEs.</td>
<td>.19</td>
<td>*.71</td>
<td>-.40</td>
</tr>
<tr>
<td>20. Hearing a patient's NDE makes me less afraid of death.</td>
<td>.15</td>
<td>*.66</td>
<td>.05</td>
</tr>
<tr>
<td>21. Patients are making up stories when they report their NDEs.</td>
<td>.74</td>
<td>.04</td>
<td>.16</td>
</tr>
<tr>
<td>22. I would like to work with a patient who has had a NDE.</td>
<td>.74</td>
<td>-.05</td>
<td>-.18</td>
</tr>
<tr>
<td>23. Patients' reports of their NDEs should be ignored.</td>
<td>.62</td>
<td>.49</td>
<td>.35</td>
</tr>
<tr>
<td>24. Patients often feel more comfortable if a nurse is present when telling spouses and family of their NDE.</td>
<td>-.17</td>
<td>*.73</td>
<td>.03</td>
</tr>
<tr>
<td>25. I would not want to work with a patient who has had a NDE.</td>
<td>.63</td>
<td>-.05</td>
<td>.42</td>
</tr>
</tbody>
</table>

% variance 29.6 15.1 8.7
cumulative % variance 29.6 44.7 53.4
correlation coefficients > .51 are starred

test-retest nor equivalent forms of the same test reliability coefficients were calculated. Experts in the disciplines of nursing, sociology, and psychology were used to help establish content validity. Construct validity was established through factor analysis. Cronbach alpha reliability coefficients were obtained to test for internal consistency of the subscales.

Criterion validity could not be established at this time, since there are no previous studies dealing with nurses' knowledge of near-death
phenomena, nurses’ attitudes toward near-death phenomena, or nurses’ attitudes toward care of patients who have had NDEs. Hence, there are no prior criteria whose relationship to the present instrument can be evaluated.

Because the knowledge level of RNs was unknown, open-ended questions were used to determine whether nurses knew about NDEs, and to ask whether nurses had any questions, thoughts, or feelings brought forth by the questionnaire. These open-ended questions added greatly to the completion time of the questionnaire. Nurses had many questions regarding the relationship between suicide and NDEs and the effect alcohol has on NDEs. Nurses knew the basic elements of the NDE, but not the causes and effects of NDEs.

The revised Near-Death Phenomena Knowledge and Attitude Questionnaire developed in this study consists of demographic questions plus three scales of 23, 23, and 20 items, which respectively measure nurses’ knowledge of near-death phenomena, nurses’ attitudes toward near-death phenomena, and nurses’ attitudes toward patients who had had NDEs. The questionnaire may be used to discriminate among individuals varying in degree of knowledge and attitudes toward NDE; to determine the relationship, if any, between the independent and dependent variables; and to expand the body of knowledge available to nurses who care for critically ill patients. When intensive care nurses have more knowledge available to them about NDEs, they will be able to work more effectively with patients who had had NDEs and their families.

References


A Comparison of UFO and Near-Death Experiences As Vehicles For The Evolution Of Human Consciousness

Lorraine Davis, M.A.
Montague, Michigan

ABSTRACT: This study compares unidentified flying object experiencers (UFOErs) with near-death experiencers (NDErs) in regard to changes in attitudes toward self, others, and life in general, toward religious or spiritual orientation, and toward psychic abilities and beliefs. Kenneth Ring's questionnaires administered to NDErs (1984) were given in this study to 93 persons whose UFOE included either a light experience, an object experience, or a "close encounter." The author concludes that the UFOE, like the NDE, provides impetus toward spiritual growth, but neither as consistently nor as strongly.

The purpose of this study was to test the hypothesis that the unidentified flying object experience (UFOE), like the near-death experience (NDE), provides an impetus toward spiritual growth in terms of (a) increased positive attitudes and decreased negative attitudes toward self, others, and life in general; (b) increased belief in broader, more universal "spiritual truths" rather than narrower, denominationally oriented religious doctrines; and (c) increased psychic sensitivities.

Ms. Davis is an author and lecturer on consciousness studies. This paper was derived in part from her M.A. thesis submitted to John F. Kennedy University. Requests for reprints should be addressed to Ms. Davis at Route 1, Box 122, Eilers Road, Montague, MI 49437, from May through November, or at 616 Aleta Place, Pleasant Hill, CA 94523 from December through April.
Method

Questionnaires

Questionnaires from Kenneth Ring's *Heading Toward Omega* (1984) were presented to a group of 206 UFOErs. This battery of questionnaires consisted of the (1) Background Information Sheet, which included, in addition to standard demographic data such as name, age, education, and occupation, a description of the individual's UFOE; (2) Life Changes Questionnaire, designed to test the effect of the UFOE in terms of increase, decrease, or no change in attitudes toward appreciation of life, concern for others, concern with impressing others, materialism, and quest for meaning; (3) Religious Beliefs Inventory, to test growth away from narrower denominational beliefs toward a broader spiritual universalism; (4) Psychic Experience Inventory, to explore changes in a variety of psychic abilities and beliefs, (5) Future Scenario Questionnaire, to examine what vision of the near future UFOErs now have, to see whether they report apocalyptic visions similar to those reported by some of Ring's NDErs; and (6) Behavior Rating Inventory, filled out by acquaintances who knew the experiencers well enough to report on whether or not they had changed since the experience. The latter was included in an attempt to evaluate the objective validity of the subjects' self-evaluation.

Sample

The packet of questionnaires was sent to 250 UFOErs on the mailing list of the Institute for UFO Contactee Studies (IFUFOCS), and was also distributed to 11 UFOErs who volunteered at a meeting of the Western States Division of the Mutual UFO Network (MUFON) in Mountain View, California. Of the 261 potential respondents, 55 never received the mailing because of inaccurate addresses; of the remaining 206 subjects who presumably received the packets, 93 (45%) mailed back completed questionnaires.

Results

Respondent Profile

Respondents from 28 American states, Canada, Puerto Rico, and Australia ranged in age from 25 to 73, with an average age of 44 years. Of these respondents, 60% were female, 40% male. There were 80 whites, seven Native Americans, two Hispanics, one black, one Oriental, and two of unknown ethnic background. The group consisted of 39
married individuals, 17 single, 16 divorced, eight remarried, seven widowed, two separated, and two of unknown marital status. Religious preferences reported were 24 Protestant, 13 Catholic, 11 what might be termed "New Age" spirituality/mysticism, four nonmainline Christian, two Buddhist, two Baha'i, one Native American, three miscellaneous, 22 "no specific religion," six "no religion at all," and four unknown.

Educationally, the group median and mode reported "some college," placing the group slightly above the 1980 U.S. Census median of 12.5 years for persons 25 and older. Respondents occupied a wide range of positions in the arts, business, academia, social sciences, religion, health, management, technology, homemaking, personal services, clerical services, manufacturing, engineering, research, sales, and government; five individuals were currently unemployed, nine were retired, and five were students.

UFOEs

The 93 respondents reported almost 200 UFOEs, occurring in New Zealand, the Caribbean Islands, France, Italy, Israel, Canada, and a variety of U.S. locations. The earliest reported experience occurred in 1926, the most recent in 1985. Respondents ranged from 3 1/2 to 73 years of age at the time of their experiences.

In an attempt to identify UFOE patterns that could help to define the experience, each UFOE description submitted by a respondent was examined for elements used in the description. I constructed the following composite definition by combining the 27 elements having a frequency of ten or more:

A UFO experience, which can last from just a few seconds to hours, may consist of (1) sighting an unusual light in the night sky, often moving but sometimes stationary; and/or (2) sighting an unusual object, often circular but sometimes cigar- or other-shaped, out-of-doors that often moves soundlessly through the sky, frequently in mountainous areas; and/or (3) what might be termed an "inner experience," sometimes fearful, sometimes occurring in or near a bedroom, which can involve dreams, out-of-body experiences, hypnosis, and/or time loss. Some individuals experience being on board a UFO and seeing beings who can communicate with, physically examine, advise, and/or hypnotize the UFOEr. The experience may include witnesses who are often, but not always, aware of what the UFOEr is experiencing.

Certainly the first two parts of the definition would meet with little
objection from most UFO researchers; they add little, if anything, new to existing descriptions. However, the third part refers to an aspect of the UFOE that is less commonly found in UFOE definitions. That difference may be due to the increased incidence in my sample of "close encounterers," as defined below, in contrast to the UFOE population at large.

**UFOE Classification**

I elected to classify the UFOEs in terms of lights, objects, and close encounters, categories similar to those originally created by astronomer J. Allen Hynek (1972, p. 12). To permit examination of survey results from a perspective of UFOE subgroups, I classified each of the 93 respondents into one of the following UFOE categories: (a) close encounterers (object or light less than 500 feet away), 64 respondents; (b) object experiencers (object greater than 500 feet away), 16 respondents; (c) light experiencers (light greater than 500 feet away), ten respondents; and (d) those with insufficient information to classify, three respondents.

Since many (58%) of the UFOErs reported more than one kind of experience, UFOErs were classified as (a) close encounterers if any portion of their experience(s) included a classic object encounter of 500 feet or less, or contact of any sort with UFO beings, forces, etc., including contact through dreams, out-of-body experiences, psychic channeling, etc.; (b) object experiencers only if no close encounter (CE) was also involved; and (c) light experiencers only if there was no CE or object experienced.

The following UFOE examples illustrate the three categories, including breakdown of the CE category into three further subtypes.

**CE Type 1.** This might be called an externally stimulated event. That is, there is no apparent reason to believe that the light was manufactured by Respondent #27, a 45-year-old woman who reported the following joint sighting.

We were returning to Yuma, Arizona, from the Coast, heading due east on a straight highway halfway between El Centro, California, and Yuma. This is a one-hour drive we've made many times.

I first observed what I thought to be an especially bright star directly ahead. Then I thought it must be an airplane or a helicopter because it turned blue. About this time my husband noticed it and it changed to pink and was definitely getting larger (moving toward us).
Then it changed to yellow-white, became huge and was headed directly toward us. I closed my eyes and braced for collision. (By this time, I was sure it was a huge airliner.) The light was blinding.

When nothing happened I opened my eyes and the light was in the other lane of the highway. Both of us now thought it was an airliner making an emergency landing, but as it passed us it made no sound. We looked at one another and said in unison: "What the--was that?"

I turned to watch it continue down the highway, fearing it would overrun somebody. As it receded, it rose into the air straight up, heading just a little north of west until it disappeared from view.

We looked for other cars hoping someone else had seen it, but the highway was deserted.

We had left El Centro expecting to arrive home in time to catch a 10:00 TV program. That is, we left there at 7:30 California time, which should have brought us home at 9:30 Arizona time. When we arrived home, the half-hour show was over and it was 10:30.

We were dumbfounded by the time loss and didn't connect it with the light until much later, when I read of such happenings among the tons of books I brought home from the library on UFOs. We saw no shape, only an enormous light.

CE Type 2. This type is most readily characterized as "inner." The example includes recall under hypnosis and even uncertainty as to "how much is 'real' and how much is 'imagination.'" Respondent #15, a 38-year-old male, described his UFOE as follows.

First, let me point out that I have very little conscious recall of the events—only enough to cause me to request hypnotic regression to stimulate further recall. Hence I am not at all sure how much is "real" and how much is "imagination."

Having said that, the "incident" happened while on a camping trip with a friend in the fall of 1980 in the southern Colorado mountains, near the town of Crestone. Sometime in the night, or early morning hours, a large saucer-shaped craft came up the canyon where we were—hovered just over the treetops—shined some type of greenish light on us which caused us to become paralyzed, and then, "transported" us (me at least) aboard.

I experienced several puzzling circumstances which eventually led me to a face-to-face meeting with a "little" alien (??) whom I felt I knew and who gave me some guidance and counsel, and then "transported" me back to my sleeping bag when I "determined" I would remember before I went back to sleep. (He told me I would remember nothing of the "encounter," only the messages, and they only in a subconscious way.) There is much more, of course, but that is the essence of the event.

CE Type 3. This category includes the atypical cases that do not specifically refer to UFO details. They do not mention UFOs or beings,
yet involve experiences of light or contact similar to those in a UFOE. These respondents were on the IFUFOCS list presumably because such cases sometimes elicit a UFO connection under hypnosis. Accordingly I elected not to exclude them from my study. Respondent #22, a 56-year-old homemaker whose experience occurred 30 years ago while she was a graduate student, presented a very detailed description complete with drawings. For the sake of brevity I shall paraphrase her description, with the exception of a brief final quote.

At approximately 2 a.m. a small white light entered through the top of her bedroom window, grew in size and color (yellow-orange-red) as it traveled down the window to the floor, along the baseboard and toward the bed. It changed from a ball to the shape of a fire to a golden glow with nondescript lines and shadows. It left the room following exactly the same pattern but in reverse order. The experience left the respondent "frozen" on the spot and trembling. She subsequently checked the entire house for signs of fire but found none. She concluded her description by saying: "it was not unusual for me to awaken and study from 2 a.m. to 5 a.m. . . . My mind was sharp and functioning best at this time of morning. This was not a dream!"

Object. Respondent #5, a 72-year-old retired widow whose 1975 UFOE is typical of an object experience, described it as follows.

I was watching the Smothers Brothers on TV. During the commercial break I opened my living room door to let my dog in and heard a sound above my home. I thought a helicopter was landing. My dog had hurried to her bed. I had to cross the porch and step down to look up over my roof. I expected to see a high quality special helicopter as it had a smooth sound. A man in Pittsburgh said he heard a sound like a twirling rope. I feel his description of the sound was more accurate. I looked higher up. I saw a large football-shaped vehicle moving slowly from east to west or northeast to southwest (I figured) toward Pittsburgh. I was in awe as it was about 1,000 feet high—very large. I thought at first it was a balloon but it was covered with projections much like antennas. A glowing ball was going from the object to the antenna's end—and returned. I feel this was an outside source of energy. Venus was bright, so it helped me identify these antenna-projections and the light was traveling to and from all over the caterpillar-like projections. The entire object was aglow, encircled by a red-green golden ring. My neighbor came out and looked when I ran over and rapped on her door. She said, "My God, is it the end of the world?" This happened at 8:30. At 10:30 I was still in awe and had phoned friends to look—then realized it had left. I seem to remember slipping on my neighbor's steps and had a red mark below my knee. Next morning when I combed my hair it didn't want to lay down. Seemed full of electricity. Since then my skin is allergic to most
everything and I get small growths on my arms like clustered mushrooms. Also top of head and front of neck and top of back.

**Light.** Respondent #80 is a 28-year-old graduate engineering student working on his thesis. He reported the following joint 1981 light experience, which was corroborated by Respondent #64.

I observed while on a backpacking trip in the Bridger Wilderness area of the Wild River Mountains, an orange light approximately four to eight times the diameter of the largest star. This orange light moved across the sky at about the speed of a low-flying airplane. However, no sound came from the orange light. This first orange light went from one side of the sky to the other in approximately a straight line. Shortly after it disappeared a second orange light came from the same direction as the first one. The second one appeared identical to the first one and moved about the same speed. The second orange light moved approximately halfway across the sky and then it executed what appeared to be an instantaneous 90-degree turn. Thereafter it continued moving in a straight line until it disappeared over the top of the trees. (Note: The orange lights appeared to be considerably higher than a low-flying plane that would be going at that speed would have to be, i.e., the lower a plane flies the faster it "appears" to be flying. The orange lights seemed lower than a high flying jet.) Also, two friends saw a light traverse the sky before I turned over to look. I was trying to go to sleep and when they started talking I thought they were just seeing an airplane.

**Life Changes Questionnaire (LCQ)**

In Ring’s research with near-death experiencers (1984), 23 LCQ statements were used to define five value clusters: (a) appreciation of life (2 statements); (b) concern for others (8 statements); (c) quest for meaning (6 statements); (d) concern with impressing others (3 statements); and (e) materialism (4 statements). Table 1 lists the responses of NDErs from Ring’s (1984) study and of UFOErs from the present study to these five value clusters in terms of increase in positive values and decrease in negative values.

UFOErs and NDErs both show far more increases than decreases in appreciation of life. However, that effect is significantly smaller among UFOErs than among NDErs. Both groups also show far more increases than decreases in concern for others; again the effect is significantly smaller among UFOErs than among NDErs. Both groups furthermore reported far more increases than decreases in quest for meaning; for this effect, the difference between UFOErs and NDErs was not significant.
Table 1

Responses of NDErs and UFOErs on Life Changes Questionnaire

<table>
<thead>
<tr>
<th>Values cluster</th>
<th>Response</th>
<th>NDErs</th>
<th>UFOErs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appreciation of life b</td>
<td>increased</td>
<td>23</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>unchanged or decreased</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Concern for others b</td>
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<td>23</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>unchanged or decreased</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Quest for meanings c</td>
<td>increased</td>
<td>24</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>unchanged or decreased</td>
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<tr>
<td>Interest in impressing others c</td>
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<td>12</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>decreased</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>Interest in materialism c</td>
<td>increased or unchanged</td>
<td>14</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>decreased</td>
<td>13</td>
<td>30</td>
</tr>
</tbody>
</table>

* From Ring (1984)

b Difference between NDErs and UFOErs significant by chi-squared test at p = .05

c Difference between NDErs and UFOErs not significant by chi-squared test

About a third of the UFOErs and a half of the NDErs reported decreased interest in impressing others and in materialism. For these changes, the UFOErs and NDErs did not differ significantly from each other.

UFOErs thus responded similarly to Ring's NDErs in their increased appreciation of life, concern for others, and quest for meaning, and in their decreased interest in impressing others and in materialism. However, UFOErs' value changes suggesting spiritual growth were neither as consistent nor as strong as those shown by NDErs. Not only did fewer UFOErs respond to statements in the appropriate direction to indicate spiritual growth, but those who did so tended to choose the milder "increased" or "decreased" responses rather than "strongly increased" or "strongly decreased." For two of the selected values clusters, the difference between the NDErs and UFOErs was statistically significant.

There was no clearcut pattern of differences among the UFOE subgroups described above.

Religious Beliefs Inventory (RBI)

Spiritual growth was measured with Ring's RBI, a list of 12 statements of religious belief, six of which reflect conventional Christian
beliefs (e.g., "Eternal life is a gift of God only to those who believe in Jesus Christ as savior and Lord") and six of which reflect spiritual universalism (e.g., "The essential core of all religions is the same"). Respondents were asked to indicate whether they were more or less inclined to agree with each statement than they had been prior to their UFOEs.

Ring (1984) calculated a "spiritual universalism scores" based on the double difference method, i.e., the sum of spiritual universalism statements the respondent is more inclined to agree with minus those he or she is less inclined to agree with, plus the sum of conventional Christian statements the respondent is less inclined to agree with minus those he or she is more inclined to agree with. Ring's 172 respondents included 76 NDErs; 30 "non-NDErs," individuals who had come close to death but did not report NDEs; and 66 control subjects who had never come close to death. Mean scores for all three groups were positive, indicating a net change in the direction of spiritual universalism (since their near-death event for the first two groups, and over the previous decade for the control group). The spiritual universalism scores averaged 5.84 for NDErs, 4.30 for non-NDErs, and 3.85 for the control group.

Mean scores of all UFOEr groups fell between those of the NDErs and non-NDErs. Object experiencers had the highest UFOEr score, 5.80, close to that of Ring's NDErs; close encounterers averaged 4.91; light experiencers, with the lowest score among UFOErs, 4.40, still scored higher than did Ring's non-NDEr group. The average score of all 91 UFOErs who completed the RBI was 5.00. I could not test the statistical significance of differences in spiritual universalism scores between UFOErs and Ring's subjects, because Ring reported only mean scores and not standard deviations. However, it is clear from these means that UFOErs' scores more closely resemble those of people who have had a near-death episode than those of control subjects who have never come close to death.

Ring (1984) also reported the proportion of respondents who had extremely high spiritual universalism scores, i.e., at least eight out of a possible twelve. Again, the UFOErs fell between NDErs and non-NDErs in spiritual universalism: among NDErs, 49% had extremely high scores; among UFOErs, 36%; non-NDErs, 30%; and control respondents who had never been close to death, fifteen percent. Chi-squared tests comparing UFOErs with NDErs and with non-NDErs yielded no significant differences.

Psychic Experience Inventory (PEI)

The PEI addresses changes in frequency of 14 varieties of paranormal phenomena. Ring (1984) calculated a composite psychic experience
index by summing the number of items for which an increase in incidence was reported following an NDE. Ring found that 58% of NDErs scored eight or higher on the composite psychic experience index; in the present study, 53% of UFOErs scored eight or higher.

Item analyses showed remarkable similarities between NDErs and UFOErs. The two psychic phenomena reported to have the highest frequency of increase among NDErs, experiences of inner wisdom (96% of NDErs) and intuition (80%), also had the highest frequency of increase among UFOErs (69% and 72% respectively). Those items that were reported as increased by half or more of Ring's NDErs (telepathy, synchronicity, clairvoyance, knowing what someone will say before he or she says it, unexpected rescues from plights, precognition, and spirit guides) were also reported as increased by 42% to 63% of UFOErs in this study. Two *deja vu* items reported as increased by slightly more than a third of the NDErs were also reported as increased by 32% and 37% of UFOErs. As on the Life Changes Questionnaire, UFOErs reported changes similar to those of NDErs, but of smaller magnitude.

UFOE subgroups differed in their reported increases in psychic experiences. A greater proportion of close encounterers reported increases, ranging from a low of 38% reporting increased *deja vu* to a high of 80% reporting increased intuition. Fewer object UFOErs and light UFOErs reported increases: among object experiencers, as few as seven percent reported increased retrocognition, while as many as 67% reported increased inner wisdom; among light experiencers, none reported increased out-of-body experiences, while as many as 67% reported increased intuition.

The PEI also addresses changes in belief in various paranormal phenomena. Ring (1984) had NDErs rate belief in God, life after death, extrasensory perception, psychic or spiritual healing, spirit guides, reincarnation, out-of-body experiences, demonic possession, and astrology along a continuum from +2, reflecting greatly increased belief, to −2, reflecting greatly decreased belief. In the present study UFOErs likewise rated belief in those nine items, plus UFOs, extraterrestrial life, the collective unconscious, Atlantis or other lost continents, the Bermuda Triangle, and unusual animal life such as the Loch Ness monster or Bigfoot.

More than half the NDErs reported increased belief in seven of the nine items; more than half the UFOErs reported increased belief in five of those same nine items. Percent of respondents reporting increased belief in those items ranged from 60% to 96% for NDErs, and from 51% to 58% for UFOErs. In both groups, a majority of respondents reported no change in belief in demonic possession or in astrology. Thus, for paranormal beliefs as well as reported paranormal experi-
ences, changes following UFOEs paralleled those following NDEs, but were of smaller magnitude.

Ring found NDErs' increased belief to be "especially marked for those concepts that these respondents are likely to feel they experienced during their NDE itself" (1984, p. 173); e.g., mean change scores were 2.00 for belief in God, 1.92 for belief in life after death and in extrasensory perception, and 1.80 for belief in out-of-body experiences. UFOErs likewise showed greatest increases in belief in those items they experienced during their UFOEs; the highest scores among UFOErs were 1.26 for belief in UFOs, 1.06 for belief in out-of-body experiences, and 1.05 for belief in extraterrestrial life.

_Future Scenario Questionnaire (FSQ)_

Ring reported that many NDErs experienced a planetary vision, or global precognition, and he found that many respondents, particularly those who reported more profound NDEs and had encountered a being of some sort, described a common vision of the world's near future that he summarized as follows:

There is, first of all, a sense of having total knowledge, but specifically one is aware of seeing the entirety of the earth's evolution and history, from the beginning to the end of time. The future scenario, however, is usually of short duration, seldom extending much beyond the beginning of the twenty-first century. The individuals report that in this decade there will be an increasing incidence of earthquakes, volcanic activity, and generally massive geophysical changes. There will be resultant disturbances in weather patterns and food supplies. The world economic system will collapse, and the possibility of nuclear war or accident is very great (respondents are not agreed on whether a nuclear catastrophe will occur). All of these events are transitional rather than ultimate, however, and they will be followed by a new era in human history marked by human brotherhood, universal love, and world peace. Though many will die, the earth will live. While agreeing that the dates for these events are not fixed, most individuals feel that they are likely to take place during the 1980s (1984, p. 197).

Based on these visions, Ring constructed the FSQ, in which respondents choose the most likely of ten different future scenarios ranging from improvement in world conditions to massive deterioration; three of those ten choices are consistent with parts of the prototypical vision quoted above. Ring reported that 33.3% of his sample of NDErs endorsed those three catastrophic scenarios, as contrasted to 26.8% of his non-NDEr group. In the present study, 26.9% of UFOErs endorsed those three scenarios.
As with increases in psychic experiences, close encounterers proved to be different from object and light UFOErs in their global precognitions. The three catastrophic scenarios were selected by 31% of the close encounterers, but by only 13% of the object UFOErs and 20% of the light UFOErs.

**Behavior Rating Inventory (BRI)**

The BRI is an 11-item instrument designed to allow friends or relatives, knowledgeable about the respondent's values and beliefs before and after the experience, to describe what changes, if any, they perceive in the individual who had the experience. Ring (1984) reported a mode of eight out of those 11 items were answered in the same way by both the experiencer and the friend or relative who completed the BRI, and interpreted that result as evidence that "the changes that NDErs attribute to themselves are also perceived and corroborated by individuals who knew them well (and, presumable, usually best) both before and after their experience" (1984, pp. 140-141).

In the present study, 48 BRIs were completed describing 46 UFOErs, half the total sample; 61% of the BRI responses were identical to the responses the UFOErs gave describing themselves. As in Ring's sample, the modal number of responses answered in the same way by respondent and friend or relative was eight out of 11.

**Discussion**

I suggested above that the NDE and UFOE may be somewhat different but comparable experiences in higher consciousness. To explore the similarities between these two types of experience, I shall review Ring's examination of the various stages and elements of the NDE from a parapsychological or holographic perspective (1980), and briefly examine analogous elements of the UFOE. Emergent similarities will elucidate how the UFOE, like the NDE, may be an experience in higher consciousness.

**Peace and Out-of-Body Experience**

In discussing stages 1 and 2, peace and out-of-body components, Ring concluded that something seems to separate from the physical body
and take on an existence of its own, one in which there is continued awareness of both self and environment. The NDE is first of all, then, in Ring's view, an out-of-body experience.

OBEs were common in this sample of UFOErs, being reported by 57 individuals (61%). Some of those OBEs occurred during the UFOE. Almost a quarter of the high scorers on the PEI reported that OBEs had become more frequent since the UFOE. My respondents as a group reported an increase in belief in OBEs second only to increase in belief in UFOs; the OBE was the only concept for which both NDErs and UFOErs reported a major increase in belief. As it seems clear that many of my UFOErs thus experienced being able to function in another realm or level of consciousness, I would suggest that their UFOEs were also exercises in another realm.

The sense of peace commonly experienced by NDErs in stage one is by and large absent from the UFOE. My respondents reported a mixture of positive and negative feelings, including, in decreasing frequency of report, fear, feeling of requesting or welcoming the UFO, reassurance, joy, anger, feeling of protection, sadness, excitement, calm, strangeness, wanting to leave with the UFO, and secrecy. Emotional reactions to UFOEs were thus quite varied, in contrast to the positive reaction experienced by most NDErs.

Tunnel and Light

In analyzing stages 3 and 4, the tunnel and the light, Ring suggested that:

these extraordinary phenomena represent . . . a shift in levels of consciousness. . . . When consciousness begins to function independent of the physical body, it becomes capable of awareness of another dimension—let us, for ease of reference, simply call it for now a fourth dimension. Most of us, most of the time, function in the three-dimensional world of ordinary sensory reality. According to the interpretation I am offering, this reality is grounded in a body-shaped consciousness. When one quits the body—either at death or voluntarily, as some individuals have learned to do—one's consciousness is then free to explore the fourth-dimensional world. This means, as we will see, that the elements of the core experience with which we are here concerned are not unique to near-death states but are potentially available to anyone who learns to operate his consciousness independent of the physical body. Any trigger that brings about this release may induce such experiences. It happens that coming close to death, for reasons that are obvious, is a reliable trigger effecting this release of consciousness. But to repeat: Anything that sets consciousness free from
the body's sensory-based three-dimensional reality is capable of bringing about an awareness of the fourth dimension. There are numerous accounts of these experiences by individuals who have entered into this realm—without dying. (1980, pp. 234-235)

I would suggest that UFOErs are among those who have entered this realm, that their experience somehow involves being released from "the body's sensory-based three-dimensional reality . . . bringing about an awareness of the fourth dimension."

Just as the OBE occurs in NDEs and in UFOEs, the element of light is common to both experiences. Light is one of the most frequently reported elements in the UFOE. The 93 respondents in this study mentioned light a total of 150 times.

In contrast, a tunnel was mentioned by my respondents only eight times. Ring quoted consciousness researcher Itzhak Bentov as saying in a personal communication that the tunnel effect:

is a psychological phenomenon whereby the consciousness experiences "motion" from one "level" to the other. It is the process of adjustment of the consciousness from one plane of reality to another. It is usually felt as movement. This is so only for people . . . for whom this is new. For people who are used to going into the astral or higher levels, this tunnel phenomenon does not happen anymore. (Ring, 1980, p. 238)

Perhaps most of my sample of UFOErs no longer need to experience the tunnel effect, as 68% of those reporting OBEs indicated having had multiple OBEs. Alternatively, the necessary sense of "motion from one level to the other" might be provided by the movement so often associated with objects or lights in the UFOE. Moving lights were reported 42 times and moving objects 20 times, and the object or light was seen while in a moving car 27 times.

World of Light

The final NDE stage in Ring's prototypical model, the "world of light," is entered after passing through the tunnel.

At this point, the individual perceives a realm of surpassing beauty and splendor and is sometimes aware of the "spirits" of deceased relatives or loved ones.

What is this world? . . . It is another frequency domain—a realm of "higher" frequencies . . . a realm that is created by interacting thought
structures. These structures or "thought-forms" combine to form patterns, just as interference waves form patterns on a holographic plate. And just as the holographic image appears to be fully real when illuminated by a laser beam, so the images produced by interacting thought-forms appear to be real. (Ring, 1980, pp. 246-247)

Ring extended this interpretation to spirit forms:

Just as object-forms are, theoretically, from a holographic point of view, a function of interacting mind patterns, so, too, are encounters with "persons" in "spirit bodies." Such "entities" are, then, the product of interacting minds attuned to a holographic domain in which thought alone fashions reality. The fact that communication between the near-death survivor and the "spirit-form" is usually said to be telepathic in nature again points to a world of existence where thought is king. (1980, p. 248)

I would suggest that the entities met by UFOErs fall into the same category as NDE "spirit bodies"; they communicate by telepathy and otherwise live in a world where thought seems to be king.

Ring then addressed the rare instances when near-death survivors have hellish experiences:

In my view, what is happening in these cases is that the individual is "passing through" a lower frequency domain (although he may occasionally—temporarily—"get stuck" there). This domain is also a holographic reality and is organized in precisely the same way as the paradisical realm we have already considered. The principle difference is in the nature of the minds that are interacting to create this reality. (1980, p. 249)

UFOErs don't usually report entering a "world of light." Their experience takes them to a different kind of world, not the hellish one alluded to above, but still not the glorious realm of light either. Instead of being surrounded by a sense of utter, ineffable peace and love, many UFOErs, finding themselves apparently on board a UFO or otherwise in contact with apparent UFO beings, describe a more impersonal, less caring experience, one in which the emphasis is not on being totally loved but on being examined and then perhaps being given information that one may or may not be allowed to remember.

Kundalini Hypothesis

Another possible interpretation of the similarities and differences between the NDE and UFOE is to consider them as variations in
development in kundalini energy. Eastern mysticism has long believed in the existence of a bioenergy that is said to lie latent at the base of the spine like a coiled snake. This kundalini energy is believed to bring spiritual enlightenment when it is set free by rising up through the body's seven energy centers or chakras. Chakras open usually through meditation or other spiritual practices, but spontaneous openings may occur.

It was suggested to me by parapsychologist Sharon Solfvin (personal communication) that NDErs may experience an opening of the fourth or heart chakra, as evidenced by the sense of profound love with which they return from their experience. It is possible that the UFOEr may experience an opening in one of the other chakras, perhaps the third or solar plexus chakra, which seems to relate more to the question of ego and identity.

Japanese scientist and kundalini researcher Hiroshi Motoyama (1981) has stated not only that psychic abilities are awakened by kundalini release, but that the types of psychic abilities vary according to which chakras are opened. He stated that the first three chakra openings result in predominantly extrasensory abilities, such as telepathy, clairvoyance, and psychometry, whereas fourth chakra openings lead to psychic powers that can create new energy and transmit it to others, such as psychokinesis and psychic healing. Further studies of possible variations in psychic abilities among NDErs and UFOErs might shed additional light on the differences between the two groups.

Nature of the UFOE

At first glance, the various types of UFOEs seem to have little in common; the close encounter type of experience seems quite different from one involving the sighting of a light or object from afar. However, there were no clear-cut differences in aftereffects among the three subgroups, with the exception that the close encounters consistently scored higher than the object UFOErs and light UFOErs on the Psychic Experience Inventory and tended more frequently to endorse a catastrophic future vision on the Future Scenario Questionnaire.

It appears then that the commonalities among UFOErs are greater than their differences. Perhaps what they share in common is the sense that the UFOEr has experienced an important contact with something larger than the limited self with which one usually identifies. Although that connection is understandably clearer for the close encounterer, it is nevertheless present in all types of UFOE. One
senses both a longing for that unknown something out there and a confusion about having connected with it. UFOErs seem to be asking what existence is about, and often they receive information in their experiences.

I suspect that the UFOEr is on a search, looking for the meaning and order that modern-day people lack in their lives. I do not say it is a conscious search. In fact, it is probably because people today are still largely unaware of the higher self within that they look outward for their answers, and in the process find lights and objects and beings within them who help make the vital connection they aren’t even aware they’re looking for.

I believe that the UFOEr is searching for a way in which to make that most important change in direction referred to as “the turn” in Arthur Young’s process theory of the evolution of consciousness (Young, 1976, 1988). The UFOErs’ choice, subconscious though it may be, is to make that crucial change in direction, to choose growth and not entropy. And he or she does so by taking the path that apparently comes most naturally in this age of space technology, creating experience in terms of UFOs, extraterrestrial beings, and the like. By “creating” I do not mean to imply exercising mere idle imagination having no foundation in truth, but rather connecting creatively with higher levels of consciousness capable of producing experiences beyond those ordinarily known in the physical realm.

My suggestion is that the UFOE is simply another way in which humanity is trying to make contact with the higher consciousness that lies latent within each individual. As Ring wrote, “The principle difference is in the nature of the minds that are interacting to create this reality” (1980, p. 249). Those who subconsciously “elect” to have a UFOE seem to be at a point of inquiry rather than solution. They are still searching, but their end goal is the same as that of the NDEr: spiritual growth.

I contend that through their UFO experience, UFOErs have subconsciously opted to make the turn in Young’s model of consciousness toward greater spiritual growth. This choice begins them on the long, arduous task of leaving behind the old and taking on the new. We see those first steps in the changed life values, spirituality, and psychic sensitivities highlighted in this study.

Conclusion

My hypothesis was that the UFOE, like the NDE, provides an impetus toward spiritual growth in terms of: (a) increased positive attitudes
LORRAINE DAVIS

and decreased negative attitudes toward self, others, and life in general; (b) increased belief in broader, more universal spiritual truths rather than narrower, denominationally oriented religious doctrine; and (c) increased psychic sensitivities.

UFOErs in this study did, indeed exhibit these changes, but not as consistently or as strongly as NDErs. Proportionally fewer UFOErs responded in the appropriate direction and their responses tended to be of smaller magnitude; the quantitative differences between NDErs and UFOErs were statistically significant.

My findings support the concept of the UFOE as similar but not equal to the NDE. I contend that the NDE, with its emphasis on love as life's motivating force, provides a more powerful impetus to spiritual growth than the UFOE, which seems to consist more of inquiry and information-seeking than of being given the answer.

The value of this study lies largely in its pilot nature, introducing evidence of a new way to view the UFOE. The limitations of this study suggest the following modifications that should be corrected in future research:

1. a more random sample of UFOErs should be sought, as my sample consisted mainly of the UFOE population of one investigative group;
2. questionnaires should be administered to a scientifically selected control group of non-UFOErs and non-NDErs;
3. instruments measuring spiritual growth might also be given to comparable groups who have had experiences similar to the NDE or UFOE, such as kundalini openings, drug-induced altered states of consciousness, or spiritual visions;
4. less esoteric traumatic experiences such as divorce, bankruptcy, and bereavement might also be studied to see whether they carry similar impetus for spiritual growth; and
5. comparative study should be made of the differences in psychic abilities between NDErs, UFOErs, and other groups experiencing higher consciousness.

References

BOOK REVIEW

W. Stephen Sabom, S.T.D.
Houston, TX


Once upon a time a collared preacher sat down next to a drunk on a bus. After the vehicle started to move, the drunk began yelling over and over: "There ain't no heaven! There ain't no heaven! There ain't no heaven!" Finally, several stops later, the exasperated cleric turned to him and calmly but firmly said, "Well, then go to hell, but just shut up about it."

Sound familiar? Relax; help is on the way. The NDE bus has just picked up another passenger, this one offering mediation between the spiritualist zealots of postmortem survival and the narrow-band debunkers provoked by anything outside of a chi square.

As a religion lecturer at Harvard, the new rider is neither visionary nor scientist but more like a commentator, a sort of Eric Sevareid of symbolic experience, specifically the "return-from-death" experience. In her opinion, the squabble on the bus will continue to the crack of doom and still end in a draw. Hence, in this scholarly, fertile, and readable presentation, she charts a middle course: How about NDE as "story"? How about the near-death experience as the machinations of the generic human narrative imagination? Put another way, do NDE accounts speak to our impoverished religious imaginations as "otherworld journeys" once did to medieval Christians?

Certainly today's pluralistic world is starved for a cohesive myth. We ache for a unifying story of humankind that is neither fossil nor fiction, but that is grounded in both experience and culture. Nuclear holocaust and the economic crunch fuel our survival stories. But how about one that comes with a protagonist, plot, and therapeutic casuistry that may help us live without nonstop angst?

For sheer popularity, first-person NDE reports are rivaled today only

Dr. Sabom is a psychotherapist in private practice. Requests for reprints should be addressed to Dr. Sabom at 1200 Blalock #116, Houston, TX 77055.
by Vietnam veteran confessions. Interestingly, both genres of experience, when combined with a new vision, can enable a survivor's moral passage (Sabom, 1988). But less frequently mentioned are the didactic and instructional possibilities in NDE accounts. Practically ignored, Carol Zaleski contends, are the fruits of this experience; that is, how the NDE epitomizes and interprets earthly life and promotes “truth-seeking” along with “truth-telling” consequences.

So, with a pragmatic, nontheoretical bias, she pursues the literary and historical links between the modern NDE and the visionary testimonies of the Middle Ages. By examining the oral story instead of the direct experience, she precludes using these accounts to justify an afterlife. Instead, she moves us toward a different, and quite challenging medium, for apprehending immortality experience (Sabom, 1983). What emerge from this study are implications so rich that the author must scramble to find the scope and concept to contain it all. Midway through the reading, one senses an exorcism in the staging. The demons in the NDE debate are getting nervous. Now, if she can only get the drunk's and the preacher's attention...

At the outset, she proposes four prototypical otherworld journeys as pacesetters for our modern renditions. First, St. Paul struck a balance in his afterlife narrative among sin, mercy, and forgiveness. His journey made explicit the universal teaching motif in all otherworld journeys. Then, sixth-century Pope Gregory the Great, in his Dialogues, applied the hardened prospects of postmortem punishment and immortal damnation of the otherworld. The eight-century vir quidam Drythelm, the folksy subject of the historian Venerable Bede, influenced otherworld journeys with his down-home vision and deathbed conversion. Finally, spatial dimensions were added to the otherworld topography by the ruthless missionary St. Patrick, the patron saint who located an ugly coastal cave and declared it to be a facsimile of purgatory. Apparently the pagan Irish, and a lot of the rest of us, believed him.

Organized with these narrative influences, medieval otherworld itineraries began with the disengagement of the soul from the body. Typically, a lamentation on the infidelity of the flesh presaged the soul’s assumption of a corporeal form. An angelic guide or guardian joined the soul as it emigrated through a symbolic conveyance from this life to the next.

Obstacles were encountered. A cleansing ordeal by fire and a ritual crossing of a border or bridge connoted catharsis, sacrifice, penalty, and separation. As earthly deeds and intentions were reviewed and weighed, existing cultural values were reinforced. Restitution through
alms and penance were assigned. Following the return from the otherworld, physical and emotional souvenirs of the trip, such as afflictions, scars, and conversions, were identified. A medieval narrator reminded the audience of the trip's powerful, arcane revelations.

Like the NDE, the medieval otherworld vision was the "poor man's mantle of prophecy": it could happen to anyone. But unlike the NDE, the earlier journeys were sanctioned only when they conformed to the prevailing religious doctrines. For us, the author claims, the mark of an NDE's genuineness is its nonconformity. Nevertheless, in both versions, one discovers the assumption that one need only to leave the body in order to experience supernatural reality directly.

What follows is a comprehensive history of the modern near-death vision. Standing alone, this section is one of the clearest, most systematic reviews of NDE research and researchers in print. But the author's purpose is to introduce the modern otherworld itinerary.

Unlike their medieval counterparts, modern NDEs occur in a friendly universe. By and large, only "good deaths" are noted. Absent is the medieval landscape of heaven and hell. The NDE exit from the body is marked by a shedding of nonessentials and a period of lucid sensory changes, features included in the medieval stories. And the NDE account accentuates its message by moving from metaphor to vision back to metaphor, a course that incorporates both actual experience and socially conditioned precepts.

Light, the loving presence, and the panoramic life review provide kinship between the NDE and its medieval relatives. The remembered self is an actor or actress who fills the stage with projected internal contents, while the observing self serves as an audience. Misdeeds may be noted along the way, but they are not negatively judged. Where the medieval guide is an authority figure, the modern otherworld presence is an affirming advocate. Modern sinners are rehabilitated rather than indicted, and the transformations are primary salutary.

The NDE interviewer or researcher is a high-tech double for the medieval narrator, conquering the survivor's resistance to sharing with reassurance rather than threat. Where the older otherworld trips were used as grist for the penitential and monastic institutions, modern accounts are used to persuade the uninitiated of the NDE's validity and importance. To underscore the NDE's grounding in actual experience, Zaleski takes considerable pains to spell out proposed explanatory theories and rebuttals. But one wonders how much of her trouble was necessary if the principle upshot is that the etiological debate is turgid with petty rivalries.

The most significant contribution of the NDE literature, to her way
of thinking, lies in its experiential raising of the compelling questions of life and death. If the strength of a symbol is that it participates in the reality it represents, then the NDE as symbolic experience promotes a utopian cosmology and gives us an updated commentary on our cultural mindset.

And here lies the theological rub. For, despite oceans of printer's ink on the subjects of grief, dying, care, and ethics, religious critics have steered a wide berth around the NDE, although less inconspicuously than Zaleski suggests (Royse, 1985). Fundamentalist charges of "cheap grace," Satanic tricks, and narcissistic false hopes about the hereafter have commingled with the posturing of liberals who, long ago discarding belief in an afterlife, tag the NDE as something of a joke. The portrait of death as pleasant is not only unsettling to some scientific literalists but also to diehard biblicists. As with any interpretive thinking, the more one ignores the metaphoric, the more narrow become one's conclusions.

To her credit, Zaleski pays her respects to all religious experience in the fashion of William James, and consistently returns to her pragmatic questions: Does the vision make a difference for the living? Does it breed complacency or does it catalyze amendment of life? In my view, this is the theological gift that her study offers to NDE research. Our epidemic denial of human immanence, our impatience with the life cycle process, and our compulsion to control all things material have extended a wide open invitation to the mindset of ancient Gnosticism, a threat that Zaleski acknowledges. To seek to possess the numinous without also owning the ordinary and the ambiguous is not only doctrinally erroneous, it is also dangerous to our health (Sabom, 1985).

Indeed, this study spawns even broader questions. For instance, can we be trusted with our experience, religious or otherwise, apart from double-blind experimental paradigms? Can we usefully deploy this experience, no matter how strange, without full academic approval? Certainly the converse offers little comfort: we have enough proof of the kill-ratios of ten neutron bombs.

Moreover, if authentic experience speaks for itself, then the modern NDE investigator/narrator could be a case in point. Those investigators with firsthand experience interviewing NDErs are also those narrators who find the paranormal features more personally believable and worthy of respect. On the other hand, those of us armchair narrators who study NDE transcripts from a distance are often more skeptical of the experience's validity and merit. The paradox of scientific detachment requires one to pull back from human subjectivity and anecdotal evidence in order to keep up the grant money. And yet, the
more one is estranged from the human ethos of the NDE, the more convenient reductionism becomes, for theologians as well as for scientists.

A psychological construct does exist, in my opinion, in the seminal work of psychoanalyst Donald Winnicott (1958), to support Zaleski's premise that the NDE is the narrative work of *Homo religiosus*. And I was frankly surprised that she didn't mention this, though in fairness, her cross-historical analysis probably belongs more in the tradition of Karlis Osis and Erlendur Haraldsson's (1977) cross-cultural surveys of NDEs. Zaleski's summary comment on Gregory the Great's contribution to otherworld narratives comes close to what Winnicott termed "transitional sphere experience," the developmentally appropriate psychic world of the three-year-old and his or her teddy bear or security blanket:

Even at its most sublime, Gregory believes, visionary experience involves the activity of an intermediate mental capacity, in which divine illumination mixes with sensory impressions. (p. 89)

Part real, part imaginary, but with a whole more mysterious than the sum of its parts, the cherished transitional object is our most primitive, self-chosen bridge between the instinctual, nurturing world of mother and the psychological entry into the "otherworld" of strangers.

The "reality" of NDE transcendence is no less certain for the survivor than the provisional world of the child and the teddy bear. The life-to-death transitional climate includes vivid encounters with supportive, familiar objects, condensations of cultural premises about the proto-numinous (noncorporeal life), and intensely regressive sensations of security and oneness. NDE transcendence accounts follow similar sequences with similar "ritualizing" categories of autochthonous contents. NDE transcendence, like something fresh out of Plato's cave, may lie beyond the distinctions of ikonic and sense-impression imagery. (Sabom, 1980, p. 137)

Paul Pruyser (1974) has brilliantly credited this early "transitional sphere experience" with forging our psychic disposition toward religious imagination and belief, and this construct has thrilling possible relationships to Zaleski's findings.

If impotency rather than ignorance is our primary contemporary threat, then NDErs have stared it in the face and emerged with a refurbished "I" position, a relative freedom from the tyranny of time, and a noticeable lack of the ulcerating type A personality imperatives
that no doubt helped engineer the event in the first place. As Zaleski put it, the "very limitation of our mortal condition gives imagination, at least temporarily, a sacramental value" (p. 93). The otherworldly journeyers of the Middle Ages knew it; the three-year-old knows it; and so does the NDEr. Thanks be to Carol Zaleski for giving us somewhere else to sit on the bus, and for helping us further locate the timeless in the reality of our times.

References


LETTERS to the EDITOR

Counseling After an NDE

To the Editor:

I would like to share my subjective response to the articles on clinical intervention in Volume 6, Number 1, of the Journal.

On the afternoon of January 1, 1978, my wife took me to the Emergency Room of Lakewood General Hospital in Tacoma. I was suffering from chest pains and other symptoms of heart problems. That evening I experienced a myocardial infarction and was “gone” for several minutes. During this first incident I enjoyed a near-death experience. I was coded six more times through the night as I kept trying to go back.

For two days, as I continued to hover near death, I tried to integrate this experience into my perceptions of life and death. I was deeply disturbed yet strangely elated, and completely confused. The only outside allusion to the events of the first night were made by Dr. Bob Crabill, our family doctor, who asked me if I remembered anything strange from the night before. I did remember regaining consciousness, as I returned to my body, long enough to raise my head and say to the three doctors who were standing at the foot of the operating table, “You’d better get back to work, fellas: I think you’re losing me.” I began to tell Bob a little of what had happened to me, but he didn’t really seem to want to hear about it.

For some internal reason I didn’t mention the incident to my normally very understanding wife, Corrine. After two days, I described the experience to a nun who happens to be a dear friend of ours. She immediately put me at ease by telling me that my experience was not all that uncommon and that, in fact, there was a new book on the market describing this very thing. The book was Dr. Raymond Moody’s Life After Life, which had been published just a short time before.

I began to feel better about myself during the course of my remaining stay in the intensive care unit. A few days after returning home, the nun, Carol Ann McMullen, came by with a copy of Moody’s book and a tape recorder. We taped a conversation about how I felt during and after the NDE. The prime points of this conversation were that I was
profoundly disappointed at not being able to stay in paradise, and I was terribly worried about why I was sent back.

Prior to the incident, I had been a heavy smoker and drinker. I stopped smoking after the heart attack, for obvious reasons, but I couldn't stop drinking. In fact, for the next three years, I lived a very self-indulgent life which included drinking like an alcoholic. Eventually my wife and some close friends intervened in my life and persuaded me to enter the Alcoholics Anonymous program. This worked well, but again after three years of hiding from the issue I was faced with the question raised by the NDE: Why was I sent back? Some people apparently get a choice. I didn't; I was sent back.

Two more years passed without the issue being resolved. At this juncture a graduate student from Seattle University, who was writing a paper about various perceptions of death, told me about the Friends of IANDS group in Seattle. I am not much of a joiner and have resisted Kiwanis, Rotary, and church men's club groups. I was initially reluctant even to consider attending a meeting of this IANDS group. There was, however, a talk sponsored by IANDS scheduled for an upcoming Sunday afternoon at Seattle University. My wife and I decided to make a "day" of it in Seattle and take in the talk. I admit to recalling very little about the talk except that I came away thinking that perhaps these people had something I needed. A short time later a friend of mine and I spent a Saturday in Seattle and attended the Friends of IANDS meeting at the Greenlake Library. After listening to a few people discuss their own experiences, I was persuaded into talking. Slowly I began to feel truly comfortable with these people and my own experience.

Therapy for me consisted of a peer group relationship with fellow experiencers and in sharing with strangers who, for one reason or another, needed to hear about my experience with the hereafter. This new-found ability to share has been the truly healing influence, imparting a sense of purpose and direction to my life. The encounter with a peer group to whom I could relate proved to be the therapeutic intervention which I had needed.

Perhaps being moved in this direction earlier through professional counseling would have sped up the process; I don't know about this. I do know, for me, however, that relating to a fellow experiencer was what began the process of becoming a whole person.

David M. Johnson
12715 Gravelly Lake Drive
Tacoma, WA 98499.
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INSTRUCTIONS TO AUTHORS

THE JOURNAL OF NEAR-DEATH STUDIES encourages submission of articles in the following categories: research reports; theoretical or conceptual statements; papers expressing a particular scientific, philosophic, religious, or historical perspective on the study of near-death experiences; cross cultural studies; individual case histories with instructive unusual features; and personal accounts of near-death experiences or related phenomena.

GENERAL REQUIREMENTS: Logical organization is essential. While headings help to structure the content, titles and headings within the manuscript should be as short as possible. Do not use the generic masculine pronoun or other sexist terminology.

MANUSCRIPTS should be submitted in triplicate, typed on one side of the page only, and double spaced throughout. A margin of at least one inch should be left on all four edges. Except under unusual circumstances, manuscripts should not exceed 20, 8½ x 11” white pages. Send manuscripts to: Bruce Greyson, M.D., Department of Psychiatry, University of Connecticut Health Center, Farmington, CT 06032.

TITLE PAGE should contain the names of the authors, as well as their academic degrees, affiliations, and phone number of senior author. A name and address for reprint requests should be included. A footnote may contain simple statements of affiliation, credit, and research support. Except for an introductory footnote, footnotes are discouraged.

REFERENCES should be listed on a separate page and referred to in the text by author(s) and year of publication in accordance with the style described in the Publication Manual of the American Psychological Association, 3rd Edition, 1983. Only items cited in manuscripts should be listed as references. Page numbers must be provided for direct quotations.

ILLUSTRATIONS should be self-explanatory and used sparingly. Tables and figures must be in camera-ready condition and include captions.